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ABSTRACT

A key assignment for a person with a specialty in local educational improvement is that of providing a school district with leadership in choosing a program that will meet needs for improvement in some area of concern. This unit presents a problem-solving model as one way of identifying problems and their causes, surveying a range of potential solutions, and considering local factors that might affect implementation of any choices so that the eventual selection of an improvement program is a suitable one and proves itself to be successful. A person who finishes this unit should be able to outline steps in selecting an educational improvement program, identify the area in which educational improvement is needed, specify aims in the area of concern, assess shortcomings in accomplishing aims in an area needing improvement, determine likely causes for shortcomings in an area of concern, identify alternative resources for remedying shortcomings in an area of concern, assess local factors favoring or opposing adoption of each resource identified as a likely solution to shortcomings, and select an educational improvement program based on alternative resources and local positive and negative factors. (Author/IRT)

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TRAINING FOR LEADERSHIP IN LOCAL EDUCATIONAL IMPROVEMENT PROGRAMS

UNIT 8. SELECTING AN EDUCATIONAL IMPROVEMENT PROGRAM

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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PREFACE

This is one of 10 units in a program of Training for Leadership in Local Educational Improvement Programs. Development of the program was begun at the Learning Research and Development Center at the University of Pittsburgh and has been carried forward at Research for Better Schools in Philadelphia.

If you have in hand the Instructor's Guide to the program, or Unit 1 entitled Training Program Introduction and General Study Plan Guide, you will have sufficient introduction to the nature and purposes of the training program. If you do not have access to one or both of these items, the following paragraphs will introduce you to this unit of the program.

This unit is designed for use by anyone holding a position calling for leadership in planning and conducting local educational change programs. This means school district leaders - central office administrators, building principals, curriculum specialists, or teachers involved in change project teams. Also it means graduate students in curriculum, administration, or supervision. In addition, curriculum specialists or field personnel of state education departments or other educational agencies may find the unit of value in their work with school districts - as in the conduct of workshops involving local school personnel.

The unit can be studied on a wholly self-instructional basis, or with an instructor's direction. It requires about 6 to 10 hours of study time.

This unit presents the essential steps a school district should take in selecting any improvement program. It offers a more detailed treatment of these steps than Unit 3, Task Flow for Designing and Conducting Local Educational Improvement Programs.

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UNIT 8. SELECTING AN EDUCATIONAL IMPROVEMENT PROGRAM

Introduction

A key assignment for a person with a specialty in local educational improvement is that of providing a school district with leadership in choosing a program that will meet needs for improvement in some area of concern. This unit deals with several sorts of competencies that are valuable in carrying out this type of assignment. Unit materials are designed to be equally appropriate for study by a school district leader with a specialty in improvement programs (curriculum coordinator, principal, assistant superintendent for curriculum and instruction) and by an outside consultant from a state education department, a university, or another educational agency.

This unit overlaps Unit 3 of this leadership training program, Task Flow for the Design and Conduct of Local Educational Improvement Programs, in that it covers Tasks 1-6 of the 11-step task flow in an expanded, more detailed way than does Unit 3. Study of both units is not redundant, for Unit 3 offers a broad view of the tasks required in designing and conducting programs, while this unit provides a "blow-up" picture of six of those steps.

When a school district decides that problems exist in the system and concludes that action must be taken to correct them, it is well to approach the situation in a rational, thoughtful way. This unit presents a problem-solving model as one way of identifying problems and their causes, surveying a range of potential solutions, and considering local factors that might affect implementation of any choices so that the eventual selection of an improvement program is a suitable one and proves itself to be successful.

It is the purpose of this unit to encourage you to approach an educational problem in a logical way so that all of its elements can be considered

carefully before a decision is reached on how to solve it. In your leadership role, you should influence local school personnel to proceed in a similar way.

This unit should require one to two days of study and consists of eight study objectives which offer a method of traveling from recognition that a problem exists to selection of a solution. When you finish studying this unit, you should be able to offer leadership in the following objectives:

Objective 1. Outline steps in selecting an educational improvement program.

Objective 2. Identify the area in which educational improvement is needed.

Objective 3. Specify aims in the area of concern.

Objective 4. Assess shortcomings in accomplishing aims in an area needing improvement.

Objective 5. Determine likely causes for shortcomings in an area of concern.

Objective 6. Identify alternative resources for remedying shortcomings in an area of concern.

Objective 7. Assess local factors favoring or opposing adoption of each resource identified as a likely solution to shortcomings.

Objective 8. Select an educational improvement program based on alternative resources and local positive and negative factors.

Unit Study Plan

Your first task in approaching this unit is to decide how intensively you want or need to study each objective. Then you should plan how to go about it. Here is a guide for doing so, either with help from your instructor (if you have one) or on your own. You will follow a four-step procedure: assess your needs to study the unit objectives, decide how to study them, assess your mastery of the unit objectives after study, and evaluate the unit.

1. Personal assessment of needs to study the unit. First, leaf quickly through the unit to familiarize yourself with the objectives and their content. Do this in a cursory fashion; it should serve only to set your mind in relation to the unit. Twenty minutes should be sufficient for skimming the unit.

Next, complete the Pre-Assessment Exercise so that you will have a basis for estimating your present level of mastery of the unit objectives. The exercise asks you to identify and outline how to perform the steps in a course of action leading from recognition of a problem to selecting a solution to it. You should not require more than thirty minutes for doing the exercise.

When you have finished the exercise, check your answers with the Pre-Assessment Exercise Answer Key at the end of the unit. Keep in mind that this exercise is for your use in determining which parts of this unit will require the greatest amount of your time and concentration.

PRE-ASSESSMENT EXERCISE - UNIT 8

Directions: This exercise offers you a way of checking how well prepared you are to perform the objectives for selecting an educational improvement program. Your answers should reflect considered thought but should not be so lengthy as to require more than thirty minutes of your time in finishing the whole exercise.

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1. Suppose that you are the curriculum coordinator of secondary programs in a school district. Through complaints of school personnel and some parents, you are made aware of problems with the social studies program at the two high schools. You know that some funds are available that could be used for improvement in this area. What procedure would you choose to follow from the point of receiving the various complaints through finally to recommending an improvement program to the Superintendent for installation the next school year?

2. Assume that your assignment is to help a school district in identifying those areas most needing improvement. What general plan of action would need to be followed?

PRE-ASSESSMENT EXERCISE (Cont'd.)

3. Suppose it is decided that a particular curriculum area (say, mathematics) needs improvement. What would need to be done to determine shortcomings of instruction in the area?

4. Average reading scores at the Watson Elementary School are from one to two years below grade level. What are some likely causes for this shortcoming?

PRE-ASSESSMENT EXERCISE (Cont'd.)

5. If you had determined that social studies materials were inadequate and teachers lacked sufficient preparation for teaching social studies in a creative, stimulating fashion, what kinds of resources would you seek and where would you look?

6. Assume that, as principal of an elementary school, you have investigated the area of reading and have uncovered three potentially good programs that address themselves to the particular reading problems being experienced in your school. What kinds of information about local factors would be needed in order to arrive finally at a recommendation of one of the three programs to the Superintendent?

Having completed the Pre-Assessment Exercise, you (with your instructor, if you have one) should check your answers with those given in the Pre-Assessment Answer Key at the end of the unit. Compare the quality and detail of your answers with those offered there. There is no one right answer to any of the questions but rather a logic that should run throughout. The Answer Key probably contains fuller responses to some of the questions in the exercise than you can offer before studying the unit.

In the table below, check the estimates you would make of your level of mastery of each part of the Pre-Assessment Exercise. Check HIGH if you judge your answer to be right on target and in adequate detail. Check MODERATE if you believe your answer to be good but lacking some points needed for a fully adequate answer. Check LOW if you find your answer to be inappropriate or very incomplete.

ITEM NO.	TOPIC IN SELECTING AN IMPROVEMENT PROGRAM	LEVEL OF MASTERY SHOWN		
		HIGH	MODERATE	LOW
1.	Procedure for selecting an educational improvement program.	___	___	___
2.	Identifying area of concern.	___	___	___
3.	Determining shortcomings in a curriculum.	___	___	___
4.	Assessing likely causes of a shortcoming.	___	___	___
5.	Conducting a survey of alternative resources.	___	___	___
6.	Assessing local factors before selecting an educational improvement program.	___	___	___

Now that you have indicated what you believe to be your level of mastery of these topics, look at the following table which lists the unit objectives and check which ones you think you need only to review and which require careful study. Your estimates of levels of mastery for the preceding list of topics will help you in checking the following list of objectives.

UNIT OBJECTIVES	REVIEW ONLY	STUDY CAREFULLY
1. Outline steps in selecting an educational improvement program.	___	___
2. Identify the area in which educational improvement is needed.	___	___
3. Specify aims in the area of concern.	___	___
4. Assess shortcomings in accomplishing aims in an area needing improvement.	___	___
5. Determine likely causes for shortcomings in an area of concern.	___	___
6. Identify alternative resources for remedying shortcomings in an area of concern.	___	___
7. Assess local factors favoring or opposing adoption of each resource identified as a likely solution to shortcomings.	___	___
8. Select an educational improvement program based on alternative resources and local positive and negative factors.	___	✓ *

* It is expected that Objective 8 will require careful study because it offers closure to the whole unit and is not represented in the Pre-Assessment Exercise.

2. Study procedure. To study the unit, keep in mind that you will gain by doing the objectives in the order in which they appear since each section of the unit assumes a certain level of understanding based on the previous one. Some parts, according to your mastery estimates, will require your careful study while others will need only to be reviewed.

You may wish to study all or part of this unit with one or more other students. Also, your instructor may elect to conduct group sessions. And, of course, you could study the unit entirely independently.

Note that this unit is organized through the presentation of information in eight objectives, the use of illustrations, and the accompaniment of exercises designed to help you determine your mastery of the objectives as you proceed in your studies. These exercises have answer keys at the end of the unit so that you can check your responses against them. Thus, you can use these exercises and answer keys to point to your strong and weak areas so that you assess yourself fairly in relation to the objectives.

As stated earlier, you probably will need one to two days to study this unit, depending on how intensively you wish to study any or all of the objectives. It is best to proceed through the unit as it is presented and then to make plans for later, more detailed study of those areas of particular interest to you. When you complete study of the unit, you will find directions for the Post-Assessment Exercise.

Also included with the unit is an evaluation form. It would be helpful if you complete and return it to the address given to help with unit revision work.

UNIT 8. SELECTING AN EDUCATIONAL IMPROVEMENT PROGRAM

Objective 1. Outline steps in selecting an educational improvement program.

This unit deals with the various steps that lead up to the selection of an educational improvement program. The choice of program should not be one of chance, but rather should occur after serious and creative thought regarding the educational situation, the school system, and the local forces that are in operation. Although decisions in all areas of life often are made out of impulse or compliance, better results obtain from careful consideration of as many factors as possible before selecting a solution. Exploring a situation thoroughly by keeping a problem-solving model in mind permits you to have as much information as you need to help you to make a reasonable decision. What kinds of steps would you take in arriving at a choice?

There is no official set of steps in the problem-solving approach. Of primary importance is that you be systematic and careful in your consideration of the problem so that you can select the best possible solution that is relevant, effective, efficient, and feasible. The exercise that follows illustrates the steps in the process of choosing a change program.

Exercise 1

Think of the types of questions that you would want to answer if you were faced with a problem to be solved. These questions will help to point you toward developing a list of steps you would go through in solving a problem. Exercise 1 presents you with a situation in a school district and asks that you outline the steps in a problem-solving approach to arrive at a choice of a solution. Remember to emphasize a systematic, detailed approach.

When you have finished the exercise, turn to the Answer Key that follows the Worksheet to check your ideas with those offered there.

EXERCISE 1 - WORKSHEET

Outlining Steps in Selecting an Educational Improvement Program

Directions: The Walker School District knows that there are $100,000 of federal funds available for a program to improve school-community relations. The district wants to apply for those funds. You are to offer leadership in assessing the situation and selecting a suitable program for improving relations between school and community. List the steps that need to be taken in arriving finally at the choice of a program that would be used in applying for the funds. You may use the other side of this sheet for scratch paper in organizing your ideas.

EXERCISE 1 - ANSWER KEY

Outlining Steps in Selecting an Educational Improvement Program

This Answer Key presents the problem-solving model that is employed in this unit. Steps 1-7 correspond to unit objectives 2-8. Each step listed below is illustrated by examples of possible considerations in planning a program in school-community relations.

Check your list with the one below. How closely do your ideas parallel those of the steps below? The order of the steps and their wording are not so important, but their content should be similar if a rational approach to selecting a program is to be achieved.

STEP 1: Identify the area in which educational improvement is needed

School-community relations.

STEP 2: Specify aims in the area of concern

Parents participate regularly in school activities.

School utilizes community resources in educational programs.

School and community work together to solve problems.

STEP 3: Assess shortcomings in accomplishing aims in an area needing improvement

Parents rarely visit the school except when notified of a discipline problem.

School conducts all learning activities within school building.

School and community attack each other frequently as the cause of local problems.

STEP 4: Determine likely causes for shortcomings in an area of concern

Busy staff members do not welcome parents and encourage their participation.

School fears for safety of children in the community and, anyway, doesn't know how to schedule off-site activities.

Lack of communication between school and community has fostered distrust and hostility between them.

EXERCISE 1 - ANSWER KEY (Cont'd.)

STEP 5: Identify alternative resources for remedying the shortcomings in an area of concern.

Create a staff-student-citizens council to increase interactions.

Institute staff training workshops in interpersonal/intergroup relations.

Hire a community liaison to organize community activities for students and to promote community participation at the school.

Strengthen school's public relations program.

Transfer current teaching staff to other schools and bring in "new blood."

Organize discussion sessions at the PTA meetings and encourage more parents to attend.

STEP 6: Assess local factors favoring or opposing adoption of each resource identified as a likely solution to shortcomings

What are the boundaries of the federal grant?

Is the grant of $100,000 enough to support the program?

What is the economic status of the community? Do parents have time to participate in school activities? Do they express an interest in doing so?

How many businesses and organizations in the community are willing to have students visiting and working?

What are staff opinions and ideas regarding solutions?

STEP 7: Select the educational improvement program to be introduced, based on alternative resources and local positive and negative factors.

Depending upon the local situation, the choice of a staff-student-citizen council and a community liaison might be made, particularly if the community is willing to try at these efforts. The staff training workshops will help at the school but their effects may not extend far enough into the community. Perhaps the best solution is a combination of two or three possibilities to work in conjunction with one another.

How closely did your responses to Exercise 1 correspond with the ideas presented in the Answer Key? It is clear that the steps outlined in the Answer Key provide a staircase of regular intervals by which you start with the identification of the problem area and proceed to the selection of a suitable remedy for it. There is some overlap and interaction among the various steps that are probably apparent to you; but by keeping each one in mind, important aspects will not be neglected. Exercise 2 gives you further practice in identifying steps in the model.

Exercise 2

Following is an illustration which reports the results of an interview with the principal of a large urban senior high school. He discusses factors leading to his school's adoption of five alternative programs. The exercise, as you will see, calls for you to identify and record certain of the principal's statements, as well as your own ideas, for each step of the model. In doing Exercise 2, it is important that you understand the functions of each of the seven steps in the process of selecting an improvement program. Here is a brief discussion of them.

Step 1. Identify the area of concern

This step locates the problem(s) needing to be solved, and will involve correction of shortcomings, overcoming difficulties, or meeting new demands placed upon the school system.

Step 2. Specify aims in the area of concern

This step calls for stating in specific and objective terms what outcomes or conditions would need to be present in order for the situation to be satisfactory in the given area of concern.

Step 3. Assess shortcomings in accomplishment of these aims

For each of the aims listed in Step 2, obtain specific information on the extent to which they currently are being met.

Step 4. Determine likely causes for these shortcomings

Identifying any conditions that could account for shortcomings in accomplishing the desired aims is important to solving the problem. Causes might consist of errors of omission (things that should be done and haven't) and of commission (things done incorrectly).

Step 5. Identify alternative resources for remedying the shortcomings

This step requires the conduct of a survey of all potential resources (materials, procedures, programs) available nationally or locally that could remedy the shortcomings.

Step 6. Assess local factors favoring or opposing adoption of each resource

Here it is important to consider all of those local factors that might have some bearing upon the choice of any alternative resource as a solution to the problem.

Step 7. Select the educational improvement program to be introduced, based on resources and local factors

This step calls for choosing or designing a program to correct the shortcomings. Selection is based on combining information on available resources and local considerations, which will point to the best solution.

The steps of the model overlap considerably and it sometimes is difficult to be sure that certain information belongs in one step rather than another. This is true especially of Steps 1 (identifying an area needing improvement), 2 (specifying aims), and 3 (assessing shortcomings). For example, suppose that the area of concern is interracial relations in a school. This area doubtless was identified because of instances of racial hostility or conflict, but such occurrences also are evidence for shortcomings (Step 3) in accomplishing the aims (Step 2) of interracial good will and harmony. What do Steps 2 and 3 add, once the problem of race relations has been selected for attention? Essentially, they provide a probing and diagnosis of the trouble area by developing a specific set of school system aims with respect to interpersonal and intergroup relations, then a careful assessment of which of these aims are not being met, and to what extent. This diagnostic process provides a fuller and more accurate basis for analyzing causes of the problem and seeking

a solution than does the initial identification of the area needing improvement.

With these ideas in mind, turn now to the description of Barrel High School, which provides you with the information needed to perform Exercise 2. When you have finished the exercise, turn to the Answer Key.

The Barrel Senior High School

Mr. Diamond was appointed Principal of Barrel High in 1968 in the midst of much student and staff dissatisfaction. The school serves nearly 4500 students, though designed to accommodate only 3000, and it covers grades 9-12. By conducting an attitudinal survey among students, Mr. Diamond determined that a large majority of students didn't like school or trust their teachers because they felt "lost in the crowd" and that teachers didn't care about them or about the school. Kids were lethargic and suspicious.

According to Mr. Diamond, the overcrowding of students at the school made it "impossible to provide for them educationally. Teachers couldn't exercise new ideas; and traditionalists were everywhere, mostly in power positions." The fact that attendance was quite low might have been construed as beneficial since it decreased the number of students in the school; but, of course, it pointed to the real underlying problem: the great lack of interest in school among students and teachers. In a previous effort to ease the crowded situation, students had been placed on a dual-shift plan whereby juniors and seniors attended in the mornings and freshmen and sophomores in the afternoons. But parents grew increasingly critical of this shift system because it meant that commuting was more dangerous and difficult and that their children were home unsupervised half of every day. They began to insist that the number of students in the school be decreased and that the dual-shift plan be eliminated.

Ninth graders came to Barrel High ill-prepared academically for high school work and emotionally incapable of addressing themselves to their studies and to the school climate. Discipline was a thorny, ever-present problem. Many students who had done well in junior high and who had been identified as fairly well motivated began to experience sudden drops in test scores and grades and to exhibit negative attitudes in the classroom. Teachers,

counselors, students, and parents noted these new developments and many complained vociferously.

In fact, approximately one half of the students in all four grade levels showed the need for improved basic academic skills and attitudes if high school were to be a successful, rewarding experience. Reading in every department was a critical need. Methods of teaching elementary math were necessary to permit teachers to teach the basics to students who hadn't learned them in the lower grades.

Other of Barrel High's difficulties pertained to teacher attitudes. Staff apathy ran rampant, and teachers were disposed easily toward blaming the students' lack of skills and interest while never casting so much as a glance at themselves as possible offenders. They had "given up" on teaching most of the students and instead concentrated their efforts on a few "good" ones.

Through parents' complaints, his own personal observations, viewing grades and scores, and faculty and student dissention, Mr. Diamond concluded that immediate and direct action was necessary. He charged his vice principal with the responsibility of instituting and coordinating a series of meetings of department heads and volunteers from the ranks of teachers, students, parents, and community organizations such as insurance companies, banks, utilities, and a local military installation. Their task was to establish goals and objectives in the various subject areas and to identify needs that weren't being met presently. These groups met regularly in 1969 and 1970 and developed objectives for each subject area. Along with the need for heavy emphasis on the basic skills (reading, math), they determined that students should learn how to live and work with others productively and respectfully and that individual needs of students be met, through remedial or enrichment experiences. The goal was to bring nearly every student of normal ability

up to grade-level achievement and to foment an atmosphere of lively interest among students and faculty. Increasing student motivation and developing career orientations were other important goals.

Resolution of Barrel High's problems seemed unrealistic in the building which it occupied. It had been built in 1939, was run down, and needed considerable renovation, particularly if it were to adequately accommodate 4500 students. Mr. Diamond decided that for any improvement program to be feasible, the number of students at the high school would have to be cut to 3000. But how could this be accomplished? Furthermore, reading and math achievement scores were averaging three grade levels below normal for approximately one third of Barrel High students, and over 2000 mid-semester warning notices had been sent to parents regarding their children's work progress.

Mr. Diamond began to look for solutions to Barrel High's predicament. He surveyed national programs emphasizing individualized instruction, affective approaches to education, and work-study arrangements. He also examined several programs in operation in the whole Lockwood School District, taking particular note of three: 1) Two hundred high-risk boys attend a half day of classes devoted to basic skills and the other half of the day in a self-contained open classroom; 2) a junior-senior program for 200 students with aims of establishing contact between students and the community, encouraging involvement between adolescents and pre-schoolers, and preparing students for careers in their community; and 3) a community-brother program in which individual sponsorship of each of the eighty students by an adult in the community provides a work-related community service project with a mental health and an affective component.

Other possibilities under consideration were the dual-shift plan then in operation, which at least staggered the students so that only half of them could be in the school at any one time, and an extensive work-study program that would get students out of the building and into the community for blocks of time. Concerned about the alarmingly low levels of achievement in his school, Mr. Diamond was leaning toward a basic skills program "stripped of all such frills as lunch period, study hall, and library."

Mr. Diamond encouraged his staff to present their ideas for improvement, as long as basic skills were integral to each suggestion. Teachers began to search for suitable educational programs; some developed their own. They submitted their ideas to Mr. Diamond, who considered them in terms of these factors:

1. Feasibility
2. Merit
3. Costs
4. Attainable goals
5. Effects upon other Barrel High staff
6. Parents' and community's views

For example, one proposal from a group of teachers suggested the development of a center for college-bound students whose achievement records were not as high as their potential and motivation. Such a program already existed elsewhere in the school district and showed promising results. Mr. Diamond reports that "these teachers wanted the cream of the crop and that would have destroyed the morale of the other staff members, who would feel stuck with the other students not showing much potential." These other teachers represented a considerable constraint upon Mr. Diamond's ability to approve the new program. Obviously, if he were to set the program into operation,

some compromise regarding composition of the student body would have to made.

Based on his "choice philosophy," Mr. Diamond continued to give priority to teacher-inspired plans and ideas for new programs, believing that it was "important for teachers to develop and choose their own programs so that they'll be more involved in them. It is just as essential that kids decide about the programs for the same reasons." He felt that he had the staff to mount good programs once they were chosen and developed.

Mr. Diamond reasoned that if he wanted only 3000 students in the school building and since Barrel High necessarily drew from a large area of the city, then he'd have to find proper sites for the other 1500 pupils. So, he found himself in the position of not only seeking good, new programs but then of locating suitable sites for them. Thus was born the idea of off-site annexes of Barrel High. They seemed to offer the best solution to the problem since off-site locations would reduce the number of students at the main building, eliminate the need for the unpopular dual-shift plan, foster more individualized attention to students, and permit teachers to be more creative in these different settings. Mr. Diamond felt confident that he would have parent support of the idea since their prime concern was to abolish the dual-shift plan and decrease numbers of students in the main school building so that their children would have a better chance of obtaining a quality education.

Difficulties in creating off-site annexes lay in finding suitable space at a reasonable and manageable rent and that required little in the way of costly renovation. Obtaining approval and support of the community adjacent to chosen sites might prove to be another hurdle. Matters such as teacher and book allotments and security personnel costs could create budgetary problems since additional funding was unlikely. Last, permission and support

from the district superintendent would be needed before anything could be done.

Taking a direct approach, Mr. Diamond searched the community and nearby regions for a building that might suit itself to a variety of programs. He found one that was occupied by a special program for only thirty students and since there was plenty of room for many more pupils, he "sold" his idea to "develop a successful program for a large number of students" to the district superintendent. This initial approval allowed Mr. Diamond to turn his attention to the choice of a program and its concomitant problems.

Believing that basic skills were the first priority and that it was urgent to "get to the freshmen before it was too late," Mr. Diamond decided that the first annex should be a ninth-grade center devoted to the basic skills, remedial reading, and preparation (academic and emotional) for the coming high school years. He presented the annex idea and word of the superintendent's approval to his staff. Everyone agreed that the idea was a good one and offered a solution to some of Barrel High's problems; enthusiasm was stirred among the group. But, no one wanted to teach in the projected ninth-grade center. They all wanted the older students and never had welcomed the wave of freshmen thrust upon them by the school district the previous year. Although Mr. Diamond believed that teachers, like students, should have options about participating in the main or an annex program, he was prepared to assign staff members to the ninth-grade center on a rotating basis. Furthermore, only those freshmen who had demonstrated achievement and positive attitudes toward school would have the option of attending the main building program.

A series of meetings with members of the community surrounding the chosen site were held to reassure people about their fears related to having a fair-sized school program in their midst. Rent and renovation costs proved not to be a problem since the building was owned and operated by the school

district, which assumed the financial responsibilities for the needed repairs. Staff and supplies came out of the main building budget, and although this represented a minor hardship, primarily in terms of security personnel who became responsible for two buildings instead of just one, it seemed worthwhile to Mr. Diamond to proceed with the annex development.

Subsequently, Mr. Diamond has selected and put into operation a total of five annex programs that address themselves to the basic problems of Barrel High. They were inspired mostly by other projects in the school district and developed and embellished by members of his own staff to meet particular needs and aims of Barrel High students. They are:

1. Ninth-grade center for basic skills, remedial reading, improved school attitudes -- 900 students.
2. Skills and training center for basic skills and job placement in the trades for potential dropouts -- 100 students.
3. College-bound center for preparation for college or other post-secondary education for students exhibiting academic potential -- 300 students.
4. Office center for specialized business training and job placement in the business world -- 500 students.
5. Social services center for affective approach to learning and work-study experiences in hospitals, dental clinics, libraries, child-care centers -- 200 students.

Most of these programs have been in operation since 1972 and seem to be accomplishing, for the most part, what they were intended to do. All costs for the programs must be paid from Barrel High's general operating funds, except for rental of four of the five annexes, which is covered by the school district. Much shifting of funds occurs to keep all of the programs running, but as they gain in success and positive community profile, Mr. Diamond expects increased mainstream funding to maintain them.

Mr. Diamond reports that he plans to "sit pat for three years to see what happens with the programs," although an aide said that she'd be surprised

if that were the case because he's always trying something new to try to meet various needs in the school.

EXERCISE 2 - WORKSHEET

Selecting an Educational Improvement Program: Steps 1-4

Directions: Below are the steps in the problem-solving model used in this unit. Your task is to identify material in the preceding illustration on Barrel High School and to categorize it according to the various steps below. In Steps 2-4, use only one area of concern, that of basic skills. Select information from the Barrel description for each step and add your suggestions on what additional data would give depth to Mr. Diamond's report. When you have completed this sheet, turn to the second page of the worksheet, which deals with Steps 5-7 of the problem-solving model.

STEPS	INFORMATION
1. Identify area(s) of concern	Barrel Description:
2. Specify aims in area of concern: basic skills	Barrel Description: Your Suggestions:
3. Assess shortcomings in accomplishing these aims	Barrel Description: Your Suggestions:
4. Analyze likely causes for these shortcomings	Barrel Description: Your Suggestions:

EXERCISE 2 - WORKSHEET (cont'd.)

Selecting an Educational Improvement Program: Steps 5-7

Directions: For Steps 5 and 6 below, you will be concerned with the choice of possible sites and programs to meet the needs of Barrel High students. Again, extract from the text information relevant to each step; add your own ideas to fill in Mr. Diamond's report. In Step 7, you will use information gleaned from the whole report to arrive at Mr. Diamond's selections.

STEPS	INFORMATION
5. Identify resources for remedying shortcomings	Barrel Description: Your Suggestions:
6. Assess local factors favoring or opposing adoption	Barrel Description: Your Suggestions:
7. Select improvement program	Barrel Description: Your Suggestions:

EXERCISE 2 - ANSWER KEY

Selecting an Educational Improvement Program

Your responses under "Barrel Description" should parallel closely the information provided in the report, although your suggestions may differ considerably from those offered here. These suggestions should be viewed as examples of responses.

STEPS	INFORMATION
1. Identify area(s) of concern	Barrel Description: Overcrowding Student achievement Student attitudes Staff attitudes
2. Specify aims in area of concern: basic skills	Barrel Description: Basic skills (reading, math) - grade level achievement for majority of students Your Suggestions: Average scores on national achievement tests as minimum for most students Using basic skills in daily lives Using basic skills as departure point for more advanced studies Positive student attitudes toward basic skills Individualized instruction according to student needs Student mastery of basic skills Student self-direction in studies
3. Assess shortcomings in accomplishing these aims	Barrel Description: Scores were 3 grade levels below normal for 1/3 of students 2000 mid-semester warning notices sent Your Suggestions: Students are not encouraged to read books, newspapers, etc. Majority of students do not want to study creative writing, literature, algebra, etc. Students exhibit negative attitudes toward studies Students do not work at own pace Students do not master skills Students do not work independently
4. Analyze likely causes for these shortcomings	Barrel Description: Students' lack of interest in school Poor preparation for high school Negative attitudes in classroom Poor teacher attitudes

EXERCISE 2 - ANSWER KEY (cont'd.)

STEPS	INFORMATION
4. (Continued)	Your Suggestions: Students do not view school work as relevant to their lives Advanced work perceived by many students as difficult and out of their realm Staff unfamiliar with methods of individualization Students are unfamiliar and uncomfortable with planning and conducting own work program
5. Identify resources for remedying shortcomings	Barrel Description Survey of national programs and curricula Survey of Lockwood School District programs Dual-shift plan currently in operation Extensive work-study program No-frills basic skills program Staff ideas for improvement, e.g., college-bound program Suitable sites for programs Your Suggestions: Staff and students share in developing programs and curricula
6. Assess local factors favoring or opposing adoption	Barrel Description: Parent support of annex idea Location of suitable space at reasonable cost Community attitude toward school site improves Staff and supply allotments limited Superintendent's viewpoint favorable Staff enthusiasm for annex idea Staff's lack of interest in teaching at ninth-grade center Staff ideas for improvement are plentiful Your Suggestions: Student views on annex idea should be considered Student views on new programs should be considered
7. Select improvement program	Barrel Description: Community support, suitable site, and budget considerations led to establishment of ninth-grade center Five annex programs selected for their pertinence to Barrel High's problems Your Suggestions: Staff and student input should have been taken more into account before selections were made

Exercise 2 gave you the opportunity to test your ability to recognize the various steps in the problem-solving model used throughout this unit for selecting an educational improvement program. The next seven objectives in the unit are the steps of that problem-solving approach viewed in detail, after your brief introduction to them through the illustration of the general concerns of Barrel High School. The more formal the model that you have in mind, the more likely you are to pay attention to all of its steps. Try to keep all of the steps of this problem-solving model before you as you continue through the unit.

Objective 2. Identify the area in which educational improvement is needed.

Any component of a school operation is a potential area of concern for which educational improvement is needed. The need might be for improved instruction offered to students, as is the case in introducing a new instructional system, changing the curriculum in one or more instructional areas, or troubleshooting in an existing instructional program. Sometimes improving the conditions under which instruction is offered is necessary for successful implementation of the program. Such instances might call for introducing a new pattern for organizing instruction, an improved in-service training program, or perhaps a program of interpersonal or intergroup relations.

Often the area in need of improvement is quite evident to everyone concerned because acute problems arise or strong demands issue from parents, teachers, or students. If students engage in frequent fights and name-calling across cultural and/or racial lines, system personnel from the Superintendent to the classroom teacher know that something must be done in the area of intergroup relations. Likewise, a high dropout rate in the district points to the need for more attention in the instruction area. Other times, the problem is obvious but its causes are subtler. For example, a non-graded approach may be judged unsuccessful when, in actuality, the problem may lie in teachers' inexperience in effectively utilizing paraprofessionals, thereby causing teachers to feel encumbered by several grade levels and the increasingly large work load.

When the school district has decided already what is the area needing improvement, then it is time to move on to the next step in the process of program selection unless the choice was made hastily and ill-advisedly, and other areas should have been considered.

Assume that the area needing improvement has not been identified and that your job calls upon you to offer leadership in determining it. What process should you follow? Obviously the focus and boundaries of your quest will depend on the circumstances. Sometimes the task will involve examining all aspects of a school system, looking for areas where there is a critical need for improvement. At other times the task will involve inspection of some segment of the school system such as the district's elementary program. Many times the task will be that of surveying one school's total program, looking for weaknesses demanding attention. At still other times, external funds are available for improvement programs, as in the case of Title I or Title III, and the task will be that of locating areas needing improvement falling within the funding boundaries set by the granting agency. While the specific activities called for in determining needed improvements will vary, the general process to be followed will be similar in each case. Likewise, the general process you will follow will be the same regardless of the job you hold, whether as school system leader or external consultant.

A five-step procedure for identifying the area(s) most needing improvement is presented below. The procedure is offered, not as the only correct sequence of steps, but as one that is adequate to its purpose. The procedure is illustrated by sketching how an area of concern might be identified in case a Title I project is to be planned for a school system's elementary schools that fits the Title I specifications.

1. Make a list of the components or aspects of the school system or school where needs for improvement might be found. In making this list, use your knowledge of the make-up of a school system and supplement your ideas by asking school system leaders and teachers to add potential trouble areas not on your list. In Title I schools, your list would doubtless include reading, mathematics, attendance, organization for instruction, teacher-pupil relations,

staff morale, interpersonal and intergroup relations among students, and school-community relations. Numerous other items would need to be on a full list of potential areas needing improvement. (One excellent source of ideas is to obtain lists of Title I funded projects from state or federal offices.)

2. Determine the best sources of information on each item on your list. Three major data-gathering methods are available to you: analysis of reports and records, interview, and observation. Your task is to decide how best to use these methods in obtaining information about each item on your list of potential areas of concern. Thus, for Title I, information on students' achievement in curriculum areas can be obtained from examining school records and from interviewing administrators, curriculum coordinators, and teachers; and information on social interactions at school can be obtained by interviewing school leaders, teachers, parents, and students, and through observation.

3. Obtain the required information and make an initial list of areas needing improvement. You probably will not have more than a week or two to develop your initial list of trouble areas so your data-gathering will need to depend on quick analyses of records, brief interviews, and spot observations. Remember, the task is to obtain an initial list of trouble areas, to be checked and revised.

4. Check and revise your initial list of areas needing improvement by discussing it with key informants. Your initial list, when reviewed by key school leaders and representative teachers, parents, and students, doubtless will cause them to suggest other areas that your investigation did not turn up. It may be necessary for you to return to Step 3 to gather further information on these areas. In the case of Title I, it is very likely that the list of problem areas resulting from this process will include achievement in reading and mathematics, student attitudes toward school, staff morale, and numerous others.

5. Make a priority listing of areas needing improvement. Ordinarily only one, or a small fraction, of the areas needing improvement can be dealt with at any given time through formal improvement programs. This is especially true when an improvement program demands major changes involving substantial costs, extensive staff training, or other uses of scarce resources. Since a priority listing is the basis for administrative decisions as to which problem areas are to be tackled, it is essential that school system leadership participate in setting up priorities and that you assist by presenting clearly the evidence you have obtained on the relative seriousness of the needs for improvement in the areas on your list. School system decisions, obviously, will be based on the feasibility of making needed changes as well as on the seriousness of need. Priority lists for Title I very often are headed by reading or mathematics as areas of concern, but student attitudes, teacher-student relations, and school community relations have recently received higher priority than heretofore.

Most often, needs for improvement in a school district or school occur in one of these basic components:

1. Instruction (curriculum and teaching methods)
2. Organization for instruction
3. In-service staff training
4. Interpersonal/intergroup relations at school
5. School-community relations

An example of a problem in each of the five components is presented below:

1. The middle school science program is found to be ineffective in arousing students' interest or in stimulating extracurricular scientific activities.
2. The Superintendent wants to initiate team teaching in the district's elementary schools because she feels that an interdisciplinary approach is needed and that substitute teachers would be called less often to fill absences of regular teachers.

3. In-service training is judged insufficient for teachers preparing to teach a new math curriculum.

4. The district's two high schools are suffering from high inter-racial tension and something must be done to alleviate it.

5. The Assistant Superintendent for Community Relations perceives a noticeable drop in parent participation in school activities as students move from the elementary to the middle school level.

Other school system components that frequently are the focus of improvement programs involve introducing a new program to serve a special student group (such as Head Start), introducing new learning equipment, changing the school plant (by building alterations or by new construction), and introducing changes in school system administration or finance.

To give you practice in outlining a procedure for identifying an area needing improvement, Exercise 3 is provided.

EXERCISE 3 - WORKSHEET

Identifying Areas Needing Improvement

Directions: One of your duties as an elementary principal in the Gung Ho School District is to maintain vigilance over the total school program to make it of most benefit to students. Your annual status survey has the purpose of locating those aspects of the school and its program that you will want to strengthen through next year's improvement activities. Outline the approach you would take under the following questions.

1. List major aspects of the school and its program that you would survey, looking for areas needing improvement.

2. What kinds of evidence would you seek, and what data-gathering methods would you use, in examining each of the following areas that may need improvement? (Under METHOD, opposite each entry under EVIDENCE, circle the one or more methods you'd use to gather evidence: R - examining records or reports; I - interviewing; O - observing.)

   a. Mathematics instruction

EVIDENCE	METHOD R I O
	R I O
	R I O
	R I O
	R I O
	R I O
	R I O

EXERCISE 3 - WORKSHEET (cont'd.)

b. Staff morale

EVIDENCE	METHOD R I O
	R I O
	R I O
	R I O
	R I O
	R I O

c. School-community relations

EVIDENCE	METHOD R I O
	R I O
	R I O
	R I O
	R I O
	R I O

3. Assuming you had arrived at a valid list of areas needing improvement, how would you proceed to list them in priority order (from most to least critical or urgent)?

EXERCISE 3 - ANSWER KEY

Identifying Areas Needing Improvement

Explanation: It is not expected that your answers will correspond point-for-point with those given in this Answer Key. However, you should have included most of the items given here, in your own words. Doubtless you will have included items in your answers that are not in the Answer Key.

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1. List major aspects of the school and its program that you would survey, looking for areas needing improvement.

   Learning materials and equipment
   Instruction in each curriculum area
   Organization for instruction
   Co-curricular and extra-curricular activities
   School plant
   Staff morale
   Teacher-student relations
   Students' interpersonal and intergroup relations
   Discipline
   Student attendance
   Staff assignments
   Teacher competencies
   Scheduling and grouping
   School-community relations
   Guidance functions

2. What kinds of evidence would you seek, and what data-gathering methods would you use, in examining each of the following areas that may need improvement? (Under METHOD, opposite each entry under EVIDENCE, circle the one or more methods you'd use to gather evidence: R - examining records or reports; I - Interviewing; O - observing.)

   a. Mathematics instruction

EVIDENCE	METHOD
Math skill learning	(R) (I) O
Math reasoning, discovery	(R) (I) O
Applying math skills to practical problems	R (I) (O)
Student interest in studying math	R (I) O
Provisions for individual differences	(R) (I) O
Teachers' methods of instruction	R I (O)

EXERCISE 3 - ANSWER KEY (Cont'd.)

b. Staff morale

EVIDENCE	METHOD
Teacher attitudes toward other staff members	R (I) (O)
Teacher participation in staff meetings	(R) (I) (O)
Staff willingness to work outside school hours	R (I) (O)
Staff willingness to accept new assignments	R (I) (O)
Degree of staff absenteeism	(R) I O
Staff interest in improving competencies	R (I) O
Teacher satisfaction with wages and working conditions	R (I) O

c. School-community relations

EVIDENCE	METHOD
Community sharing in school policy decisions	(R) (I) O
Parents' attitudes toward the school program	R (I) O
Staff attitudes toward the community	R (I) O
Community volunteers in the school program	R (I) (O)
PTA membership and activities	R (I) (O)
School activities involving community members	R (I) (O)

3. Assuming you had arrived at a valid list of areas needing improvement, how would you proceed to list them in priority order (from most to least critical or urgent)?

In arriving at a priority listing, you would need to consult staff members and parents, as well as central office personnel. In addition to individual interviews, group discussion sessions would be valuable.

The criteria that should be used in setting priorities are the magnitude of the shortcomings found, degree of urgency or criticality of the needs for improvement, and feasibility of making improvements in the area based on judgments about the available resources and community response.

Setting up a priority list does not mean, of course, that only those needs at the top of the list can receive attention. You, as principal, could probably initiate, with help from the central staff of your district, from teachers, and from parents, improvement activities dealing with several areas needing improvement.

Objective 3. Specify aims in the area of concern.

When it has been decided where improvement is needed, the next task is to specify school or district aims for that area. A clear statement of aims (goals, purposes) provides a measuring stick for success or failure of an operating program; therefore, it is important that these aims be stated in such a way that they can be gauged. Specifying aims in an area of concern requires being able to identify an appropriate or adequate set of outcomes.

Such a list of aims can help to insure that essential areas are not neglected and also can provide a basis for assessing shortcomings that already exist (Objective 4). Aims that are not fully or even partly achieved present shortcomings in a program that result in the need for improvement. Thus, identifying aims provides a strong basis for planning or selecting an improvement program (Objective 8).

All school programs are based upon decisions regarding the aims or goals that are intended to be met. The types of aims will vary according to what school planners wish to achieve and in what area. For example, a list of aims in an area of instruction, say, social studies, will differ markedly from those goals specified for a program designed to improve school-community relations. The basic areas with which schools or school districts are concerned include the following:

1. Instruction
2. Organization for instruction
3. In-service training
4. Staff utilization
5. Staff morale
6. Interpersonal/intergroup relations

7. School-community relations

8. Costs analysis

Within these areas, aims and goals will differ widely since their foci are so divergent. Suppose a school district is concerned with a curriculum area, perhaps its elementary science program. In generating aims in elementary science, the district might determine that students should achieve, or at least make significant progress toward, the following goals. Note that these aims can be categorized according to their falling within the cognitive or affective realms of instruction.

1. Learning scientific terms and classification systems.
2. Understanding scientific principles (for example, in biology, the numerous ecological interdependencies).
3. Applying these principles (to continue the biology example, developing a terrarium, maintaining an aquarium).
4. Assimilating facts.
5. Working independently.
6. Learning tool skills (as in using microscopes, chemical apparatus).
7. Using inquiry methods (observation, analysis).
8. Broadening interests in subfields of science.
9. Developing positive attitudes toward science.
10. Valuing all living things.
11. Increasing a positive self-concept through independent work and satisfaction.
12. Improving interpersonal skills by working and communicating with others (students, teachers).

The first seven aims fall primarily within the cognitive area, while those goals numbered 8 through 12 might be considered to be affective.

A second illustration of aims, this time in the area of interpersonal/intergroup relations, could include the following affective goals.

1. Developing a good self-concept.
2. Valuing honesty in behavior.
3. Accepting each other as individuals of worth.
4. Expressing a feeling of equality in behavior.
5. Developing a sensitivity toward others.
6. Respecting members of other racial, ethnic, or religious groups.
7. Engendering cooperation between and among groups.
8. Gaining experience in the decision-making process in the school community.
9. Understanding the value of bringing racial/ethnic/religious tensions out into the open for discussion and resolution.

As a final illustrative list of aims, team teaching, a method of organization for instruction, offers these objectives:

1. Keep good teachers in the field of education by offering them leadership roles as team leaders, which provide challenging work, recognition, and salary supplements.
2. Free teachers from routine clerical chores by providing them with paraprofessional help, thus enabling teachers to devote their full time to teaching and planning activities.
3. Insure that students are always in touch with experienced teachers, rather than only with substitute teachers who perform a custodial function in traditional programs; in a team teaching approach, substitute teachers receive direct guidance from other members of the teaching team.
4. Provide opportunities for teacher cooperation in planning and conducting instruction.
5. Provide a setting for training interns.
6. Permit specialization in subject areas.
7. Foster greater flexibility in grouping for instruction.
8. Reduce the number of needed teachers by assigning them teaching tasks only and giving paraprofessionals other chores (paraprofessionals can be hired at lower rates of pay than can professional teachers).
9. Provide a setting where part-time teachers can be used.

Lists of aims will vary in type, length, degree of detail, and complexity, but all of them should be stated in lucid, objective terms. In your leadership role, you may be called upon to develop a list of aims in an area needing improvement. If you were to ask other school personnel for a list of these aims, it is probable that the result would be unsystematic and incomplete. You should be able to examine aims for errors of commission or omission and then to suggest additions or deletions. It is important that you help others to state aims clearly and in such a way that later assessment of shortcomings in accomplishing these aims is facilitated. For example, if someone writes the aim "Pupil should know basic arithmetic," you could suggest that the aim be improved by considering:

1. What criteria are to be used to judge if pupil "knows" basic arithmetic? National standardized achievement tests? Comparison with other pupils in the class? Mastery criterion of, say, 90 per cent?

2. Does pupil have to show evidence of using basic arithmetic in daily, practical matters? Counting change? Determining each person's share in a group bill?

3. Should pupil exhibit self-direction in planning and conducting problems in arithmetic? Be able to formulate own problems? Be able to solve problems with minimal help from others?

4. Should pupil be able to explain why a solution to a problem is the right one, or is performing it enough?

Generating a full set of aims within an area of concern requires a grasp of the general types of goals that are relevant. They will vary with the area needing improvement, as evidenced by the examples of the elementary science, interpersonal/intergroup relations, and team teaching programs. What standards the school district sets and whether the desired outcomes are in terms of year-end levels of performance or of gains of whole classes or of individuals will affect the types of aims listed, of course. It is important also to clarify the school district's concern with student attitudes toward the program and with integrating school and home sectors of students' lives. This role of probing for aims and seeking standards is one that is not formally provided for by school districts but nevertheless has a profound effect upon clarifying objectives and enabling a proper assessment of shortcomings to be carried out in those areas.

There are several ways to develop a list of aims in the area of concern. One method is to talk with various school personnel, such as the assistant superintendent, the curriculum coordinator, building principal, program coordinator, and teachers. From these interviews, you may get a number of desired outcomes which can be transformed into a list of aims. Usually, though, information received from school personnel is sketchy and needs much rounding out before a coherent, complete list of aims is obtained. To supplement information acquired by interviewing, you may want to inspect learning materials, tests, and other records to cull ideas for your list of

aims. There may be other written descriptions or attempts at written objectives that could be helpful. Finally, brainstorming with or without program personnel in terms of what you already know about the program can yield valuable input for developing a good set of aims.

Exercise 4

Now try to develop your own list of aims. Exercise 4 calls for you to think about an area of concern -- that of individualizing instruction -- and then to write a suitable list of aims that a school or school district might wish to meet in that area. Consider the reasons that a school or district might have for instituting a program of individualized instruction and what outcomes it hopes to achieve. Take care not to confuse aims (desired outcomes) with ways of accomplishing them. For example, an aim of elementary science might be that students work independently, while a way of achieving this aim could be providing adequate space, tools, and materials for each pupil. State each aim as clearly and objectively as you can.

When you have completed your list of aims, compare it with the one presented in the Answer Key.

EXERCISE 4 - WORKSHEET

Listing Aims in an Area of Concern

Directions: Individualizing instruction consists of designing and conducting with each student, programs of studies that are tailor-made to fit his/her learning needs and characteristics as a learner. This calls for guiding each student's progress, month-by-month, week-by-week, and day-by-day, in terms of learning plans made especially for each pupil. With this definition in mind, write a list of suitable aims or goals that school personnel might want an individualized instruction program in any subject area to meet.

EXERCISE 4 - ANSWER KEY

Listing Aims in an Area of Concern

The following list of aims for individualizing instruction is not an official list. It does, however, include the key features of major individualized programs such as Individually Prescribed Instruction (IPI), Planned Learning According to Needs (PLAN), and Individually Guided Education (IGE). Note that the list stresses individual lesson plans, mastery of learning tasks, and student self-direction in performing tasks. Aims on the list also fit the open classroom approach and independent study.

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1. Locate each student in the curriculum at his/her own level of achievement.
2. Provide different instructional approaches to match each student's learning characteristics.
3. Provide help to each student on an individual basis.
4. Permit students to progress at their individual rates.
5. Insure students' mastery of learning tasks before proceeding to new ones.
6. Enable students to work on tasks using materials and methods suited to them individually.
7. Allow students to select some of their own learning goals.
8. Encourage students to plan their own approaches to learning tasks.
9. Permit students to evaluate their own work.
10. Provide flexibility in learning settings that can be adapted to each student's needs.
11. Match objectives of learning tasks to individual students' behaviors.
12. Provide opportunities for pupil teamwork to encourage peer help.
13. Encourage students' development of competencies in self-direction.

Were you able to capture the quality of the content presented in the Answer Key to Exercise 4? Did you note that the aims listed in the Answer Key were stated in such a way as to facilitate implementation of an individualized instruction program or to enable such a program to be evaluated in terms of its goals?

Thus, a good set of aims is useful in two ways;

1. As a basis for planning and conducting an educational improvement program; and
2. As a basis for assessing shortcomings in an educational improvement program already in operation.

Could your answers for Exercise 4 be used for such purposes? If not, consider them again, adding, deleting, or restating aims until you are satisfied that they are functional. Then go on to Objective 4, which deals with assessing shortcomings in accomplishing program aims.

Objective 4. Assess shortcomings in accomplishing aims in an area needing improvement.

To determine whether or not shortcomings exist, you must look at the aims listed in a particular area of concern and determine to what extent they are being accomplished. Thus, a shortcoming is the extent to which a desired aim is not being met. For example, if one aim in elementary math is that students can correctly multiply 90 per cent of the two-place number problems assigned to them and, in actuality, they are successful at only 50 per cent of them, a significant shortcoming exists for that aim. The need for improvement in an area arises from the failure to achieve a target set of aims. In Objective 3 you learned how to identify a list of aims for a particular area of concern; now you will study how to obtain and analyze data on the extent to which the aims are being achieved.

In order to assess the extent of shortcomings, it is necessary that the statement of aims be explicit enough to indicate exactly what is desired. Furthermore, is this standard established for an individual student (in which case the standard is flexible), for a class, a school, a region? To illustrate, the aim might be for individual students to exhibit over a year's time a gain from their original baselines of achievement. Here, the standard varies with each student. Or, perhaps an aim might call for all sixth grade students in the school district to better the national average obtained on standardized achievement tests. A third type of aim might state that all students achieve 100 per cent mastery of a particular learning goal. This aim would represent the least flexible of the three mentioned here.

These aims have dealt with instructional concerns; but aims in many other school areas abound, such as in school management and organization, staff morale, school-community relations, student attitudes, and so forth. The

type of aims being examined will determine the ways of obtaining data on the extent of their achievement. Methods of exploring the accomplishment of aims in elementary math would differ from an investigation into school-community relations.

Instructional aims usually are examined for shortcomings in their achievement first through the use of national standardized achievement tests. But such tests have two weaknesses: (1) They cannot take account of differences between curricula, so they consist of questions having to do with learning objectives common to most schools in the country; and (2) such tests usually focus on concepts, facts, and skills, thereby slighting other important learning goals such as analytical thinking, creativity, and problem-solving approaches. You might partly overcome these weaknesses by including in your testing battery those tests that focus on the learning goals of the local program. For example, if a school program's goals require that students understand principles and use knowledge to solve novel problems, an approach that measures such aims is offered by the Sequential Tests of Educational Progress (STEP), which were developed by the Educational Testing Service of Princeton, New Jersey. Another approach would be to change the curriculum to utilize newer curricula that include achievement tests closely geared to the learning objectives of their materials.

A third way to make achievement testing of aims more relevant to the local program is to use locally-developed tests that teachers, along with help from curriculum and evaluation specialists, build themselves. This method would require of teachers that they be close observers of students' coping, problem-solving, and work completion behaviors and that they keep careful and accurate records of such data for year-end review and evaluation.

The types of data to be gathered in checking the extent of accomplishment of a given list of aims are several:

1. Records (including test scores, progress reports, grades, teacher and student journals, minutes of meetings);
2. Interviews (with teachers, students, principals, parents, district supervisory staff);
3. Questionnaires (used for obtaining information from the same people to be interviewed; the advantage is that more people can be "interviewed" in a short amount of time); and
4. Observation (of classes, staff meetings, Board of Education, PTA, student gatherings).

Some of the data acquired in such ways will be objective, particularly test scores, grades, and minutes of meetings, while other information will be highly subjective (observations, some interviews) because much interpretation of the data will be necessary. Overlaying all acquisition of data, of course, is a blanket of interpretation since even the most "objective" information -- hard test scores -- requires some interpretation. But some data are inherently more subjective, in that the data collector must make more judgments and decisions about what the data mean. For example, an observer may note a particular behavior in a classroom (say, what might be viewed as mass confusion in a noisy open classroom) and interpret that behavior as a shortcoming in the conduct of a class, when in actuality, such behavior may be normal (mass confusion may be students moving among various learning centers on the basis of individual needs and interests). Without understanding the goals of a program, the data collector can make serious misinterpretations of the data.

This brings us to another point: The importance of probing deeply for information, avoiding a superficial, glossy study, and of confirming findings with data from two or three sources. The open classroom observer, for example, might judge the classroom chaotic and unorganized before interviewing the teacher or other participants and learning the reasoning and philosophy behind the freedom of movement and choice that was observed.

Gathering data is a time-consuming task and collecting enough information to be able to confirm and check findings takes an even greater toll. Usually, you cannot engage in full, formal evaluations since time will be too short and since the school seldom can make available the resources needed for an extended evaluation. Hence, you must be prepared to employ assessment strategies that make the best possible use of the time and resources that are available. You should be aware of factors influencing the value of information from different sources. For example, a suburban school with a student body having a low turnover rate would possess student records that were quite complete, while an urban school with a large number of transfer students would have less complete and less comparable records on students.

Your major sources of data will be the analysis of records, observations, and interviews. In assessing accomplishment of certain learning goals, you may want to combine test scores (where applicable to program aims), teachers' assessments, and observation of student performance. Obtaining evidence on student interests and attitudes about instruction in a particular subject or about the school climate may call for interviewing students. Valuable data on interpersonal/intergroup relations can be obtained by observing student-student or student-teacher interactions in various settings, by collecting reports of events that have occurred, and by interviewing staff and students for attitudes and experiences. Finally, assessing teachers' competencies

would require observation of teaching and analysis of teachers' plans and records as the most economical use of your data-gathering time.

Briefly, then, a procedure for assessing shortcomings in the accomplishment of aims would consist of the following steps:

1. Decide what data are needed to assess the degree of attainment of each aim.
2. Determine which data are available already (test scores, records, reports) and how to get needed information (perhaps through interviewing, questionnaires, observation, administering new tests).
3. Collect the data that still are needed.
4. Analyze the data to identify shortcomings in achieving the desired aims.

Let us examine an illustration of how you might use this assessment procedure in identifying shortcomings in an elementary math program. You may decide that you want information on three types of goals:

1. Knowledge of content in elementary math (terms, facts, principles, procedures);
2. Competencies in planning and conducting inquiries (investigations, creative projects, problem solutions) in elementary math; and
3. Interests or attitudes toward elementary math.

What data would you need in each goal area? In the content area, you would seek the following types of evidence:

a. Achievement tests
b. Student grades
c. Student project reports
d. Student self-evaluations
e. Teacher reports
f. Student homework assignments
g. Student responses
h. Conduct of classes

For inquiry competencies, evidence from these sources would be valuable:

a. Student reports on planning and conducting projects
b. Teacher reports on students' planning and conducting of projects

c. Project materials used
d. Student interviews
e. Teacher interviews
f. Classroom observations

Information on attitudes could be obtained from:

a. Classroom observations
b. Student interviews and self-evaluations
c. Teacher interviews and reports

Look at the three lists of types of evidence to determine which of them are available already and which will need to be gathered. Probably you will agree that in the content area the first six types (a-f) would be available to you and that the last two (g-h) would need to be obtained. Achievement tests might be the Metropolitan, the California, or the Iowa series, or perhaps a locally developed set; but they, along with grades, reports, and assignments, would be yours for the asking. In the inquiry competencies area, types a-c in most cases would be on hand, while d-f would have to be gathered. For attitudes, probably all three types of evidence would have to be obtained.

Having decided which data remain to be collected, you then would devise a data-gathering schedule to enable you to obtain all that you needed to carry out a proper assessment of shortcomings. Your time period for this task might be two days or two weeks or two months, but the shorter the allotment of time, the more efficient your strategy will need to be. The data lacking are in the area of observing and interviewing; thus, you will have to take into consideration teacher and class schedules as well as the availability of students and teachers for interviews. Their schedules to a great extent will determine yours. Furthermore, you will have to decide how to sample the various math classes, teachers, and students so as to obtain valid, representative data of as many of them as possible. Your data collection schedule also should provide some leeway for missed appointments, cancelled classes, or lengthy interviews that extend into the time slot provided for the next activity.

After collecting the needed data, you then would analyze it to identify shortcomings in accomplishing the desired aims. If, for example, the Metropolitan results indicated that one third of the sixth graders were one grade level below the national average for math, a significant shortcoming would exist if an aim stated that students should achieve at least as high as the national norm. Or, if teacher reports note that a sizable group of students are not willing or able to plan and conduct independent inquiries and require constant direction from teachers, such evidence would indicate that students are not learning such competencies and steps need to be taken to correct the situation. Likewise, if interviews with students reveal a prevalent dislike toward math, fear of working alone on projects without teacher direction, unwillingness to complete homework assignments, and lack of interest in extracurricular math pursuits, such negative attitudes can be considered a definite shortcoming of the math program and call for remedial action.

With a list of shortcomings and the extent to which they fail to meet the desired aims, you will be in a good position to begin to plan an improvement program.

By way of further example, if you were investigating student attitudes toward school, you might want to obtain the following types of evidence:

1. Attitudes toward school in general
2. Attitudes toward particular subjects
3. Interests in curriculum-related activities
4. Staff-student relationships
5. Student-student relationships

Ways of gathering evidence in these areas include the use of interviews with samples of students, administering attitudinal surveys or questionnaires, reports from teachers on their observations, records of participation in such activities as student council, the school newspaper and yearbook, dramatic productions, athletics, special clubs, social affairs, and community service projects.

Another illustration, this time in the area of school organization and management, would check for effective use of instructional resources, including staff, materials, time, and space. You would want to investigate such matters as the following:

1. Is the curriculum flexible enough to allow teachers a wide range of options in developing lessons to meet student needs?
2. Is the schedule loose enough to include planning time and periods for staff teamwork in conducting and evaluating instruction?
3. Is the staff diverse enough that every teacher is assigned to duties for which (s)he is prepared and maintains an interest?
4. Are scheduling and grouping practices effective?
5. Are marking and reporting procedures helpful and efficient?
6. How effective are guidance services and parent conferences?

These areas would be best investigated through the perusal of records and reports, interviews with the staff, and some observation of classes. The criteria you select for judging the effectiveness of the school program should relate clearly to the school's main task of guiding students toward the achievement of its learning goals. Thus, for example, grouping practices should be examined for the purpose of determining whether they foster diversification of instruction to meet individual learning needs, or whether, instead, they merely simplify the teacher's job. Guidance services should be evaluated in terms of their contribution to the personal and academic development of individual students, not in terms of their effectiveness as a disciplinary arm of the administration. And reporting procedures should be judged according to how fairly they reflect students' progress and encourage them toward higher goals.

Keeping program aims in mind increases the ability to identify shortcomings in achieving those goals. The next exercise is designed to give you practice in investigating shortcomings in an instructional program.

Exercise 5

Grand City is a Northern urban center of 500,000. It has 11 public junior high schools of grades 7-9. The student population is 60 per cent black. The school system has been racially integrated, with junior high school student bodies ranging from 40 to 70 per cent black. Also, there are many distinct nationality groups in Grand City -- Italian, Irish, German, Polish, Puerto Rican, Chinese, etc. Students are grouped heterogeneously rather than according to ability so that all classes have a fair proportion of students from all background groups.

In response to dissatisfaction with the junior high social studies program that was expressed by teachers and members of a Parent Advisory Committee, the Associate Superintendent for Instruction of the Grand City School District asked the Social Studies Curriculum Coordinator, Anna Kowalsky, to launch a systematic examination of the current program, looking toward a major overhaul.

Kowalsky's first step was to conduct a series of workshops involving junior high principals and teachers and parent representatives with the purpose of arriving at a revised set of aims for social studies instruction. The workshop participants decided that four types of aims should receive particular emphasis in the junior high program:

1. Knowledge of community organization and functioning;
2. Competencies in investigating live social phenomena in the school and the community by using the methods of interview, questionnaire, and observation;
3. Positive attitudes and interpersonal relations with others differing from oneself in race or nationality group; and
4. Positive attitudes toward the social studies instructional program.

Of these four types of aims, the workshop participants chose to empahsize the last two and developed the following specific objectives for them. For interpersonal relations, they selected:

a. Students do not reject others on the basis of racial or ethnic differences.
b. Members of racial and ethnic groups mix freely in group activities inside and outside of the classroom.
c. Students do not judge others' worth on the basis of racial or ethnic ties.
d. Students avoid the use of racial and ethnic slurs.

Desired objectives in attitudes toward the social studies instructional program included:

a. Students like social studies and look forward to classes.
b. Students judge social studies to be relevant to their lives.
c. Students engage in social studies projects with interest and enthusiasm.
d. Students choose to engage in extracurricular social studies activities, such as community service projects and additional related readings.

Assume that you hold Ms. Kowalsky's job as Social Studies Coordinator. In this exercise, your task is to outline how you would go about assessing shortcomings of the current social studies program in accomplishing aims in these <u>two</u> areas.

Turn now to the Exercise 5 Worksheet and when you have completed it, check your responses with the Answer Key.

EXERCISE 5 - WORKSHEET

Assessing Shortcomings in Accomplishment of Aims

Directions: Your task is to obtain an overall assessment of the degree to which the aims in two areas are being achieved in the current junior high social studies program. First, sketch your plan for obtaining data from the schools. How much time will you spend in each school? How much time will you allot to interpreting data and preparing a report? Assume that you have one month to complete the assessment. Second, for each of the two areas of concern presented below, the specific aims are listed for your reference. Indicate what evidence you will want to obtain and how you will get it for these two sets of aims. This part of the exercise is on the following page.

1. Overall plan for obtaining data in the district.

EXERCISE 5 WORKSHEET (cont'd.)

2. Positive attitudes and interpersonal relations with others differing from oneself in race or nationality group.

   a. Students do not reject others on the basis of racial or ethnic differences.
   b. Members of racial and ethnic groups mix freely in group activities inside and outside of the classroom.
   c. Students do not judge others' worth on the basis of racial or ethnic ties.
   d. Students avoid the use of racial and ethnic slurs.

   TYPES OF EVIDENCE:

   METHODS OF OBTAINING DATA:

3. Positive attitudes toward the social studies instructional program.

   a. Students like social studies and look forward to classes.
   b. Students judge social studies to be relevant to their lives.
   c. Students engage in social studies projects with interest and enthusiasm.
   d. Students choose to engage in extracurricular social studies activities, such as community service projects and additional related readings.

   TYPES OF EVIDENCE:

   METHODS OF OBTAINING DATA:

EXERCISE 5 - ANSWER KEY

Assessing Shortcomings in Accomplishment of Aims

Below are guidelines for checking your answers to this exercise. Remember that there are no "right" answers, but yours should have taken into consideration the limitations that were placed upon you in the Worksheet Directions.

1. Plan for obtaining data in the district.

   Considering that there are approximately 20 working days in a month, you or a member of your staff could spend one whole day in each school for interviewing, observing, distributing and gathering questionnaires, or reviewing records. The rest of the time would be used as leeway for missed appointments or improper settings for observation, for data interpretation, and for preparation of the final report. Another possibility, of course, would be to sample the eleven schools, thereby spending more time in those schools chosen to represent all of the junior high schools.

2. Positive attitudes and interpersonal relations with others differing from oneself in race or nationality group.

   Here you would want to obtain evidence on students' attitudes and interpersonal relations both in the classroom and outside of it -- voluntary associations in the cafeteria, in the halls and stairwells, traveling to and from school, and so forth. Do students choose to work (and play) with others from outside of their own ethnic/racial groups? Are there frequent episodes of name-calling, reports of fights, harassment of particular individuals or groups of students? Do students attempt to solve their differences in an open, honest, constructive way? Such information can be obtained through observation in the classroom, in the school building, and outside on the school grounds, and by interviewing a sample of teachers and students regarding interpersonal relations. Administering a sociogram to students in one or two classes per school would yield valuable data.

3. Positive attitudes toward the social studies instructional program.

   You might want to see if students appear alert and interested in class and while conducting special projects. Do they feel that aspects of social studies relate to them personally? Do they offer their own ideas and suggestions to the teacher, to other students, to parents or community members? Do they participate actively in class discussions and exhibit interest in their assignments? Would they like to spend more time on social studies? Of particular value in obtaining this data is interviewing a sample of students and teachers. A questionnaire, carefully built so as not to give away the desired answers, would be useful. Finally, a limited amount of observation would provide impressions of a general nature regarding student attitudes.

If you judge that you completed Exercise 5 unsatisfactorily, it might be helpful for you to review Objective 4 a little more carefully. Observation and interview, with some use of questionnaires, were indicated for gathering data on the two attitude areas since nationally-normed tests are not geared to examine such aims, and records would reveal only a small part of the picture.

Your role is not one that calls for expertise in evaluation methods, but rather that of providing leadership in identifying desired aims and shortcomings in accomplishing them. Once the extent of a shortcoming is realized, the task of determining why the deficiency exists and how to correct it becomes feasible. Objective 5 examines the first part of that task, determining likely causes of shortcomings.

Objective 5. Determine likely causes for shortcomings in an area of concern.

Once shortcomings in achieving the desired aims have been identified, the next task is to determine probable causes of those deficiencies. What is being done incorrectly or what important tasks are being neglected? Faults can occur in any aspect of a school system's program or organization.

Determining causes for shortcomings is an important task because it provides key bases for deciding what types of changes need to be introduced to overcome the deficiencies noted in Objective 4. Student boredom and inertia may be caused by irrelevant curricula, thus suggesting the need for new ones. Fiery blowups between students and staff or among students may be due to poor communication and lack of empathy between groups, indicating that an improved approach to interpersonal/intergroup relations is required. Teachers uninitiated to individualized instructional methods may cause a recently adopted individualized program to falter; such a situation would call for an in-service training program to correct the deficiency.

When likely causes for shortcomings have been identified, they provide an orientation in the direction of which needed improvements will remedy the situation. Planning such an improvement program follows.

To illustrate what is meant by likely causes for shortcomings, consider the following ones in a reading program. They are divided into three types.

1. Learning materials

   a. Badly sequenced materials with no clear indication of objectives to be mastered.
   b. Materials not representing a broad enough range of ability to be challenging to all students in the reading program.
   c. Materials not relevant to students' backgrounds or concerns, thus causing feelings of alienation, rejection, or indifference.
   d. Materials that are inherently dull, unable to elicit any interest from students.

2. Teaching methods

   a. Improper attention given to basic reading skills -- phonetics, decoding, vocabulary building.
   b. Use of method with one child reading aloud at a time that is diagnostic only for that student (at best) and (at worst) is boring to other pupils.
   c. No opportunity given for students to learn words that are important to them and which they use daily.
   d. Teacher spreads time over several groups and students are left to struggle alone with reading.
   e. Peer tutoring within groups is not encouraged or permitted.

3. Student grouping

   a. Ability grouping is used rather than teaching students as individuals.
   b. Minority children grouped together into the lowest ability group.
   c. Tendency to keep students in same group level, year after year.
   d. Reasons that children are grouped together may not be due to reading disabilities but to shyness, boredom, etc.

Here is a second example of probable causes of shortcomings in another area, that of interpersonal/intergroup relations. These shortcomings are divided into four different groups.

1. Social climate of school

   a. Staff views students as separate groups of students according to racial or ethnic identity, rather than as individual students.
   b. Staff tendency to favor one group over others.
   c. Students form exclusive groups according to racial or ethnic identity.
   d. Students and teachers fear physical assault.
   e. There are no minority group staff members.

2. Composition of student body

   a. Distribution of conflicting cultural, ethnic, and racial groups.
   b. Some students are bussed to the school, which causes turf problems and hostilities.
   c. Lack of rapport between students coming from comfortable, middle-class homes and other pupils coming from broken, welfare homes.

3. School-community relations

   a. Racial and class tensions in the larger community.
   b. No attempts made to open lines of communication and cooperation between school and community.
   c. No efforts made to involve or inform parents of school activities.
   d. Parent or community groups may charge staff with discrimination against, or preference for, one group.

4. Content and conduct of instructional program

   a. Materials are not suited or relevant to students' life styles.
   b. Materials may favor one ethnic group of students.
   c. Failure to deal with prejudices, fears, and hostilities in the classroom.
   d. Teacher expectations for students according to their racial or ethnic group, creating jealousy and hostility.

Some of these probable causes can be corrected directly, while others cannot be and must be compensated for at a program level. For example, interpersonal conflicts that occur as a result of bussing new students cannot be resolved by the elimination of bussing. Rather, ways must be found to achieve harmony in the school by dealing with student concerns, fears, and hostilities in a positive, direct approach. In some cases, it is sufficient to "unravel the onion" to get to the core of the problem and by knowing the cause(s) and the effects, thereby improve the situation to some extent. In other instances, it is necessary to introduce new factors (an improvement program) to remedy the faults that exist.

The reasons for analyzing the causes of shortcomings are two:

1. Knowing the causes can direct attention to various types of resources for remedying shortcomings,
2. Remedying those causes provides the focus for a local educational improvement program.

If, for example, your newly installed individualized reading program is floundering and, if you also recognize that your teaching staff in reading are not confident with or enthusiastic about the new program, you have a

direction in which to look for a solution: You would examine in-service training programs to find one that would provide your teachers with a solid background in individualizing instruction methods and an understanding of the philosophy and value of such an educational approach. On the other hand, if you had not carried your investigation of the reading problem deep enough and had been satisfied to know only that the individualized reading program was failing and everyone was unhappy with it, you may have decided to discard the new program. This action would have meant a loss in terms of the funds spent on purchasing and outfitting the new program and of its eventual benefits to students participating in it.

Likewise, with the cause of a shortcoming apparent, the focus of an improvement program is clear. For example, when you have determined that the teaching staff is unhappy because its members have no input or recourse to school policy decisions, you as principal can focus on remedying the situation by considering the institution of grievance machinery or a teacher-administration council to deal with teacher complaints and to discuss teacher suggestions.

How can likely causes for shortcomings be identified? Often, they are not readily apparent and require delving into the situation for data surrounding the problem. First, you would need to investigate the local situation. Find out what the problem is, what its effects are, who is involved, when and how the shortcoming developed. With this base, you then would talk with teachers, students, parents, or others having some perspective or point of view regarding the problem in order to get their ideas and comments on likely causes. You also might want to brainstorm your own ideas in terms of the information that had been gathered so far. It would be important to check bits of data from one source with that from others so that you could be sure that you had valid information.

Having acquired a body of information regarding probable causes of shortcomings, you would need to select those that you judge most important. The effort should be made to single out the most central underlying causes of shortcomings. There may be one clear cause of the shortcomings that has been identified, or there may be several interrelated causes, as is usually the case when students are not achieving up to expectations in a curriculum area, for example.

The causes chosen as initial points of attack should be those that the school staff is most ready to deal with. Also, it often is important that the causes selected for attention involve changes that will pay off quickly with observable benefits. You will need to diagnose the situation in the school or school system carefully in order to zero in on those causal factors that are apt to be important contributors to a shortcoming. The next exercise will give you practice in identifying causes for shortcomings in a school system's instructional program.

Exercise 6

Your task in this exercise is to list likely causes for the shortcomings noted, based on reading the following material and on brainstorming any additional reasons that could account for the deficiencies.

While Ms. Kowalsky is seeking to improve the junior high social studies program in the Grand City School District (as described in Objective 4), Mr. D'Angelo is grappling with problems in elementary social studies. Having recently assumed his position as Assistant to the Social Studies Curriculum Coordinator, Mr. D'Angelo was assigned the task of reviewing the elementary program with an eye to assessing its shortcomings so that improvements might be made for the coming school year.

D'Angelo visited a number of the elementary schools and discussed the social studies program with an assortment of social studies teachers. The curriculum in use in the classes had been developed in 1956 and, according to many of the teachers was growing more irrelevant with each passing year. Although the curriculum may have been suitable for life in the 1950's, it did not seem to deal with the problems and complexities of the urban environment of the 1970's. Teachers reported that students were bored with their social studies and seemed to be unaware of its connection with their everyday lives.

Mr. D'Angelo reviewed the curriculum outlines for the elementary social studies program and then observed several classes. He noted that an "expanding environment" approach was used from grades 1 through 6; that is, first graders learned about Home and Neighborhood, second graders about the City, then the State, the Country, the World, and finally in sixth grade about the Universe. The trouble with this approach, he reasoned, was that mass media brought information from around the world into the home, but such topics were discussed only in designated grades. For example, he found that many first and second graders were enthusiastic about discussing space shots, but teachers following the curriculum were unable to take advantage of that interest, since it was an area designated for sixth graders. Thus, they would lead class discussions and projects only in the topics established for their particular grades.

Iowa standardized test scores revealed poor results by elementary students in the school district. From what D'Angelo was able to determine in talks with teachers, the Iowa tests did not utilize the expanding environment approach to social studies. There were plenty of maps and graphs in them, thus explaining the heavy emphasis on the use of such tools in the elementary classes.

Junior high school teachers of social studies complained about the lack of preparation of the seventh graders. They did not know geography and had

no sense of history as a basis for their continued studies in junior high school. Their concepts of time and chronology were poor, and they had little understanding of how people and nations had affected each other to cause certain historical events to take place.

Mr. D'Angelo decided, then, that the social studies program in the elementary schools had the following shortcomings:

1. The curriculum was boring and irrelevant to students now.
2. Students were scoring badly on the Iowa standardized tests.
3. Junior high school social studies teachers were dissatisfied with the level of preparation of new seventh graders.

Turn now to the worksheet for exercise 6 and when you have completed it, check your ideas with the ones on the Answer Key.

EXERCISE 6 - WORKSHEET

Determining Likely Causes for Shortcomings

Directions: From your reading of the preceding discussion, list likely causes for the shortcomings in the old social studies curriculum. Then add your own suggestions of possible causes for the shortcomings.

LIKELY CAUSES (from reading):

LIKELY CAUSES (from brainstorming):

EXERCISE 6 - ANSWER KEY

Determining Likely Causes for Shortcomings

Likely Causes (from reading):

Arrested curriculum development in social studies seems to be the major cause of the shortcomings of the elementary program, possibly due to neglect of the social studies during the 1950's in favor of science and math emphases or an antiquated view of social studies as a program teaching only geography and patriotism.

The fact that students found the curriculum boring and irrelevant to their interests points an accusing finger at the Expanding Environment approach so common in many elementary social studies programs. This approach presumes that children are unaware of broad or distant concerns or events; but with the widespread impact of mass media upon the American population, such an assumption is clearly outdated. Our complex urban environment throws various people together and forces them to relate to one another because they are affected by one another. Television brings us news from around the world and beyond. A curriculum that ignores these realities will lose its relevance and appeal.

Low scores on the Iowa tests indicated that the tests and the curriculum were unrelated, except for the emphasis on using maps and graphs. Elementary social studies teachers were dealing with place geography, numbers of tons of cotton exported per year by a country, and representation of such data on graphs, but they were not helping students to understand causes and effects of embargoes, import taxes, fishing boundaries, etc., their timing, and chronology in history.

Likely Causes (from brainstorming):

Some possiblities are these; you may have more suggestions.

Teacher skills may not have been adequate for utilizing the curriculum to its best advantage nor for inspiring or involving students in social studies activities.

Lack of project activities to enhance a broader view of social studies.

Lack of application of social studies to community or social problems.

As the causes of shortcomings become clear, appropriate ways to correct the deficiencies are evident. Sometimes the solution is easily within reach and simple to effect; often, though, it can call for a lengthy, detailed search of resources on the local and national levels. Objective 6 deals with identifying alternative resources for correcting deficiencies.

Objective 6. Identify alternative resources for remedying shortcomings in an area of concern.

Having analyzed the needs for change in the local educational situation and arrived at a selected list of changes that should be made within the area of concern, you are ready to undertake the next task. Objective 6 begins with this list of desired changes and covers the process of surveying national resources available for making the changes. A resource is any product, procedure, or program that could be adopted as the means for making a designated change in the local situation. A resources search is the process of locating, analyzing, and appraising alternative resources with respect to making a desired change. The term source refers to information channels, whether they be experts in the particular field, libraries, trade publications, computer data banks, etc.

There is a wide array of resources that is always increasing, for example, as new curricula are developed at both the elementary and the secondary levels, as different approaches to organization for instruction are created, as teacher education and in-service training methods are newly improved, and as various student groupings come into use. The field of educational products, such as texts, tapes, programmed materials, games and simulations, films, filmstrips, slides, film loops, transparencies, maps, and globes is fast proliferating and shows no sign of faltering. With this abundance of resources available, you should determine the best access route to them in order to limit the time and energy spent in acquiring the needed information.

A number of sources of information exist to provide you with access to what you need. They can be divided into the following general categories and are discussed here in limited detail.

1. State education departments. Most people in education are aware of

the department in each state that monitors educational offerings. Through their central offices or intermediate units, the state education departments provide specialists who can offer expert consultation services to school districts. Whatever the area of concern, both generalists and specialists at the state level can be called upon to provide direct information or referrals to where needed data can be obtained.

2. Intermediate or county units. School districts will deal most often with intermediate units rather than directly with state education departments. These units are responsible for designated school districts and provide direct help or access to it from generalists or specialists in particular areas. Intermediate units generally are more familiar with the local situation than would be the more distant state education department.

3. Educational information centers. These centers exist in about twenty states and are a major source of information drawn from national, state, regional, and local resources in support of educational decision-makers' problems and areas of concern. Basic services usually include:

a. Computer and manual information retrieval from such national sources as the ERIC collection

b. Preparation and dissemination of research information reports (reviews of literature);

c. Reference services;

d. Training and dissemination activities and information services.

Information centers generally negotiate with intermediate units representing a school district's area of concern and its request for relevant data. Trained searchers receive a search request, clarify the client's requirements, and then undertake a search of all available resources to locate and retrieve material bearing directly on the question. The result is a package of knowledge in the form of article or book printouts, bibliographies, abstracts and other

materials. Research and Information Services for Education (R.I.S.E.) in Pennsylvania is a good example of an educational information center that tailors each of its literature searches to the client's needs. Copies of their searches may be made available to other interested clients who request them. R.I.S.E. is currently engaged in the establishment of a state-wide educational information network.

To find educational information centers like R.I.S.E. in your state or region, you can consult two sources:

a. Survey of ERIC Data Base Search Services, which describes other search services that are available throughout the country. It can be obtained from:

   Jonathan Embry
   ERIC Central - Suite 303
   4833 Rugby Avenue
   Bethesda, Maryland 20014

b. Directory of Educational Information Centers, a partial listing of information centers arranged by state with a subject index. It can be purchased from the Government Printing Office in Washington, D.C. for a minimal fee.

4. Educational Resources Information Center (ERIC). This national information system is a source for obtaining documents on education and a network of decentralized information centers. It collects, screens, organizes, and disseminates reports; furnishes copies of educational documents at nominal cost; prepares interpretative summaries, research reviews, and bibliographies on critical topics in education; and services its decentralized centers throughout the country.

There are two ways of accessing ERIC materials - manual and automated searches. A manual search calls for the use of such ERIC reference tools as:

a. Thesaurus of ERIC Descriptors, which provides a structured vocabulary of educational terms to assist users in searching the system;

b. Research in Education (RIE), a monthly abstract journal listing recently completed research reports, descriptions of outstanding

programs, and other documents of educational significance that are indexed by subject, author or investigator, and institution.

c. Current Index to Journals in Education (CIJE), a monthly guide to periodical literature in educational and education-related publications, indexed by subject and author.

Once you have determined from the abstracts in RIE those articles of interest, you then can consult an ERIC microfiche collection in order to read those which you have selected. ERIC collections are maintained by many university and college libraries, schools and supplementary educational centers, state education offices, ERIC clearinghouses, regional educational laboratories, and other education-related institutions. Consulting the Directory of Educational Information Centers will help you to locate one. Copies of documents can be obtained from the ERIC Document Reproduction Service in either microfiche or hard copy (paper) form.

Having a computerized search done for you may not be feasible since clearinghouses have limited resources for providing detailed replies to inquiries and several weeks may be required to process your request.

5. Council for Educational Development and Research, Inc. (CEDaR). This organization of research and development centers and regional educational laboratories across the country publishes a catalog which includes descriptions of programs at each of the centers and labs, available products, anticipated products, and available information sources. CEDaR's address is Suite 206, 1518 K Street, N.W., Washington, D.C.

6. People. Experts in their fields offer the most up-to-date, valuable information because they are direct sources and often can provide data that has not yet appeared in print. Such experts are likely to be people who:

a. Attempt to survey resources in a field and thus are knowledgeable about various approaches and can compare them; or

b. Are or have been engaged in the development of a product and therefore would have intimate knowledge of that product as well as comparative knowledge of similar ones; or

c. Have had similar problems to yours in their own district and could provide information relating to which solutions were tried, which have worked, and which have failed.

In seeking information, especially from a proponent of a particular product, you should be careful to get several sources of information and not rely on just one expert, since a person's choice of resources reflects that individual's own philosophy, selectivity, and biases.

Formal information systems (books, journals, newspapers) are a good starting point for obtaining the names of people who are likely sources of information. You also can identify the experts by attending meetings and conferences of national associations, contacting national offices of organizations in various subject areas, listening to speakers and seeking them out for discussion, and asking to be placed on their mailing lists. People are willing to give information, but you have to take the initiative and express your data needs.

7. National clearinghouses. The function of a clearinghouse is to clear away materials and information that are deemed irrelevant to its particular specialization. At this time, for example, there are sixteen ERIC clearinghouses, each of which has a field of specialization and access to experts in that area. Besides acquiring, reviewing, and abstracting the documents listed in RIE, these clearinghouses prepare bibliographies and interpretations of research which are listed also in RIE. See the attached list of ERIC clearinghouses for areas of specialization and locations.

Alternative programs and approaches to education are a fast-growing area calling for specialized information. Two organizations which provide such services as reports and documents, bibliographies, consulting and referral functions, and planning aids are:

E R I C Clearinghouses Each of the 16 clearinghouses, as well as acquiring, reviewing, abstracting, and indexing the documents announced in **Research in Education**, also prepares bibliographies and interpretive summaries of research which appear in **Research in Education** and are disseminated through the ERIC Document Reproduction Service. Because clearinghouses have limited resources for providing detailed replies to inquiries for information on specific topics, educators are urged to subscribe to **Research in Education** and obtain the other ERIC publications to search for desired information.

ERIC Clearinghouses and their addresses are listed below:

ERIC CLEARINGHOUSES ON . . . .

CAREER EDUCATION
204 Gabel Hall
Northern Illinois University
DeKalb, Illinois 60115

COUNSELING AND PERSONNEL SERVICES
University of Michigan
School of Education Building, Room 2108
East University & South University Sts.
Ann Arbor, Michigan 48104

DISADVANTAGED
Teachers College
Columbia University
Box 40
New York, New York 10027

EARLY CHILDHOOD EDUCATION
University of Illinois
805 W. Pennsylvania Ave.
Urbana, Illinois 61801

EDUCATIONAL MANAGEMENT
University of Oregon
Eugene, Oregon 97403

HANDICAPPED AND GIFTED CHILDREN
The Council for Exceptional Children
1920 Association Drive
Reston, Virginia 22091

HIGHER EDUCATION
George Washington University
One Dupont Circle, N.W., Suite 630
Washington, D.C. 20036

INFORMATION RESOURCES
Stanford Center for Research and
Development in Teaching
Stanford, California 94305

JUNIOR COLLEGES
University of California at Los Angeles
Powell Library, Room 96
405 Hilgard Ave.
Los Angeles, California 90024

LANGUAGES AND LINGUISTICS
Center for Applied Linguistics
1611 North Kent Street
Arlington, Virginia 22209

READING AND COMMUNICATION SKILLS
National Council of Teachers of English
1111 Kenyon Road
Urbana, Illinois 61801

RURAL EDUCATION AND SMALL SCHOOLS
New Mexico State University
Box 3 AP
Las Cruces, New Mexico 88003

SCIENCE, MATHEMATICS, AND ENVIRONMENTAL EDUCATION
Ohio State University
400 Lincoln Tower
Columbus, Ohio 43210

SOCIAL STUDIES/SOCIAL SCIENCE EDUCATION
Social Science Education Consortium, Inc.
855 Broadway
Boulder, Colorado 80302

TEACHER EDUCATION
American Association of Colleges for
Teacher Education
One Dupont Circle, N.W., Suite 616
Washington, D.C. 20036

TESTS, MEASUREMENT, AND EVALUATION
Educational Testing Service
Princeton, New Jersey 08540

a. National Alternative Schools Program (NASP), at the University of Massachusetts, Amherst, Massachusetts, and

b. National Consortium on Educational Alternatives, at Indiana University, Bloomington, Indiana.

8. Product guides. Several organizations function to give detailed and up-to-date information about educational products. They are:

a. Educational Products Information Exchange (EPIE), which has done, for example, tests and reviews of different kinds of overhead projectors in terms of their cost and efficiency. Another example of EPIE material is an evaluation of the PLAN, IGE, and IPI instructional systems, which describes and analyzes in depth each of these individualized programs. In addition EPIE distributes materials such as the Elementary Science Information Unit, a kit developed by the Far West Regional Lab in Berkeley to provide comparative information through a set of pamphlets, filmstrips, and tapes about six alternative elementary science curricula.

b. Educators Progress Service publishes a series of educators' guides to such items as curriculum materials and free films, filmstrips, guidance materials, tapes, scripts, and transcriptions, and social studies materials. The guides are selected, annotated listings of materials arranged by title under subject with sections marked teacher reference, title index, subject index, source index, and sometimes sample units of free materials.

c. ALERT Information System of the Far West Lab has published a "Sourcebook of Elementary Curricula Programs and Projects," which describes curricula, models, resources, and training in fifteen areas, such as:

Aesthetics and Arts
Affective Education/Personal Development
Career Education
English/Language Arts
Ethnic Education and Intergroup Relations
Foreign Language and Bilingual/Bicultural Education
Mathematics

The Sourcebook is an extremely valuable reference offering the detailed information needed for elementary school decision-making.

d. American Institutes for Research (AIR) have a series of 21 product development reports, each dealing with the developmental history of a recent educational product and containing product descriptions (characteristics, rationale, materials, usage), development, and evaluation. Some of the product series are:

The Cluster Concept Program
Facilitating Inquiry in the Classroom
Intermediate Science Curriculum Study
The Taba Social Studies Curriculum

9. Site visits. One of the best ways to obtain information about resources that you've already identified is to visit sites where the program or materials are being used. This approach provides valuable data that is not available to you from reading descriptions of the programs of interest. Such sites can be identified by asking knowledgeable people, perhaps at the intermediate unit or the state education department, who can tell you where suitable programs are in operation so that you can see them and talk directly with school personnel using them.

10. Libraries. Access to pertinent data can be found by research at a library. You would want to concentrate on the following tools:

a. Current Index to Journals in Education (an ERIC tool).

b. Education Index, which includes nearly fifty years of major educational journals, yearbooks, bulletins, monographs, and some government materials and is issued ten times yearly.

c. State Education Journal Index, an annotated index to materials from the educational journals of the states and Washington, D.C.

d. The New York Times Index, to which some universities have access via a terminal. A television-linked screen flashes documents in microfiche drawn from twenty years of Times data. The articles can be read and copies ordered.

e. Reference books, periodicals, newspapers.

There is a great variety of sources of information; and although you are not likely to use all of them to find solutions to any given problem, you will use several to locate what you need to know. The causes of shortcomings in the particular area of concern will determine the sources that you choose to investigate. For example, if you were trying to locate resources to solve the reading problem in an inner-city school district, you might find that there were several causes for the deficiencies. The curriculum might be boring and irrelevant to students; ability-grouping might be judged ineffective and destructive; and teachers might not be familiar with other methods of teaching

reading. Given these causes, you then would focus your search in those three areas:

1. You would seek more relevant curricula to inner-city student needs;
2. You would want to examine other grouping methods or individualized approaches in practice; and
3. You would investigate various in-service teacher education programs that dealt with understanding inner-city children's needs and teaching reading in innovative ways.

Once you have decided what kind of searches to conduct, the next step is planning those searches. Such planning needs to take account of information sources and effective strategies for making use of available sources. Usually, there will be very limited time and money for conducting resources surveys. In the example of seeking alternative reading programs, the first step might be to locate and consult one or more experts who could give immediate references to a number of such programs. Perhaps the expert(s) could refer to some summary reviews of such programs in the literature, e.g., the ALERT Sourcebook, AIR product descriptions, journal articles. Conducting an ERIC search might be decided upon at this time, assuming funds were available for this purpose. Other types of sources to be employed might be review of journal articles and promotional materials from publishing companies, resource centers and labs possessing materials for examination, and schools to be visited to see programs in use.

At the end of your search, you would want to have several choices of curricula, programs, or approaches relative to each of the three causal areas as a basis for judging their relative effectiveness in meeting the local needs in question. These likely alternatives then would need to be considered in light of local factors that would favor or oppose their adoption by the district. Also, these choices would align themselves in a priority list according to how good a match they provided between themselves and the needed improvements in

the local situation. If the search yielded only one or two choices, you might need to delve deeper into the literature and to contact more experts knowledgeable in the area of concern.

With this information approach in hand, examine a simulated situation involving the need for a solution to a local problem. Your task is to critique the action that was taken.

Exercise 7

In the Lancer School District, parents have been expressing criticism and dissatisfaction with the elementary math program, claiming that their children were not achieving in or enjoying the present offering. Achievement scores were well below the national average and students reportedly were bored with their assignments. Since such criticism was rather widespread in the district, as evidenced at the PTA meetings, in the parent advisory council, and in individual parents' visits to the school, Mr. Sharpe, principal of the Pierce Elementary School, became concerned. He'd heard of the Mathematics in Color program and knew that it was being tested at an adjoining school district. He visited the school to see the program in action, was impressed with it, and returned to Pierce School with enthusiastic reports of it. His teachers became interested in the new program, so Mr. Sharpe recommended to the Superintendent of the Lancer District that Pierce adopt the Mathematics in Color program.

Turn now to the Worksheet for Exercise 7 and when you have completed it, refer to the Answer Key.

EXERCISE 7 - WORKSHEET

Identifying Alternative Resources to Remedy Shortcomings

Directions: After reading the description of the Pierce Elementary School needs for improvement in math, and in view of your understanding of the approaches presented in this objective, your task is to critique Mr. Sharpe's approach to solving the local problem and to add your ideas on how you might have improved his method of choosing an appropriate program.

CRITIQUE:

SUGGESTIONS FOR IMPROVEMENT:

EXERCISE 7 - ANSWER KEY

Identifying Alternative Resources to Remedy Shortcomings

Your response to this exercise should include most of the following ideas, which were presented in this objective.

CRITIQUE:

Mr. Sharpe did not carry out a careful investigation of the shortcomings in the math program or of the causes for these deficiencies. Had he done so, he may have discovered, for example, that the curriculum was adequate and what was really needed was an individualized approach to math instruction or an in-service program to train teachers in new methods of instruction.

It would appear that Mr. Sharpe, in response to parent criticism to the program, was too quick to jump to the only "solution" with which he was familiar -- a math program in operation at another school. Although visiting a school to see a program in action normally would be a reasonable way of learning about and assessing alternatives, the fact that it was the ONLY choice investigated by Mr. Sharpe is a fault. If he had examined other possibilities, he may have found other programs that were a better match for his students' needs. Surely one visit to a school and a talk with local personnel are not sufficient grounds to base a decision to adopt a program in one's own school.

Furthermore, no communication was made with parents regarding his choice of a solution. This failure could be important, since it was in response to parents' criticism that he originally set out to remedy the situation. He should have discussed his ideas for solutions and his recommendations with the PTA or the parents advisory council before meeting with the Superintendent.

SUGGESTIONS FOR IMPROVEMENT:

The first step that Mr. Sharpe should have taken was to engage in a careful analytical study of the exact shortcomings in the math program and what the likely causes of the deficiencies were. This action would have provided him with a clear idea of the school's needs, so that he then could consider how best to meet them.

Second, Mr. Sharpe should have discussed his school's needs with various experts with whom he was acquainted so that he could obtain information or leads on potentially satisfying programs. He might have consulted with personnel at the intermediate unit or the state education department, the university. or other district personnel, conducted a literature search, or asked a representative of a regional lab or research and development center for ideas.

He thus would have obtained a list of likely programs that might have served as solutions to Pierce's problems and be considered in terms of local factors favoring or opposing their adoption. The important point here is that Mr. Sharpe and others involved in the decision-making would have had a choice among several programs with a good match between program features and local educational needs. Site visits at this point would prove to be beneficial and could lead to a clear sense of the value of each program.

Objective 7. Assess local factors favoring or opposing adoption of each resource identified as a likely solution to shortcomings.

Up until now, you have specified aims, assessed shortcomings and their causes, and identified alternative resources likely to remedy the shortcomings. Objective 7 involves the task of analyzing and assessing factors in the local situation that favor or oppose adopting each of the resources selected for consideration. When this task has been completed, the selection of the product(s) for implementation follows. Thus, this objective discusses the final step in obtaining all of the data needed to make the decision regarding which products (resources) to select.

The aim is to choose one or more products which will eliminate the causes of the shortcomings in the local educational situation. Eradicating the causes will erase the shortcomings as well. For example, if students' reading scores are well below grade level (shortcoming) and you discover that the curriculum does not take into account individual differences so that students are paced above or below their abilities (cause), the adoption of an individualized reading program (one resource) with concomitant teacher training for individualization, (another resource) will de-fuse the cause of the problem and promote better performance on reading tests.

An essential basis for choosing among the alternative resources is an examination of local factors that can help or hinder their adoption. Although several products may provide a good match with local educational needs, their adoption may be strongly opposed by a person or group that could cause havoc in the school district. Basically, the concern here is to judge the feasibility of the alternative resources in the local situation before making the selection and implementing it. People in the district may disagree about the value of a particular product and if their views are not considered, they

could have a detrimental effect upon the product's implementation as well as upon good relations in the community. Likewise, cost factors may so outweigh the benefits of the product as to make its selection a financial albatross for the district. Exceptional leadership skills in working with local personnel are needed for assessing constraints and supports with respect to each of the alternative products. Often such leadership involves helping to arrive at a compromise among opposing concerns.

On the other hand, there may be widespread support in the community and among school personnel for a particular product. Knowledge of and enthusiasm for the product among people involved would enhance that product's suitability as the chosen solution. This situation should be given due credit because it will ease the district's transition from the old to the new program.

Generally, though, there will be positive and negative forces which will affect the final selection of a product. These forces will have to be identified, explored, and weighed as to their relative importance and effects in the school district. Part of this task falls within the area covered by Objective 7 (identifying and exploring positive and negative local factors) and part of it within Objective 8 (weighing their merits in anticipation of selecting the best solution).

Given one or more resources for remedying each of the causes of the shortcomings identified in the area of concern, the first task is to list features of the resources that are apt to be constraints or supports with respect to adopting any resource in the local situation.

Three sets of factors will be critical in determining the feasibility of adopting any of the resources: costs, difficulty of implementation, and attitudes of persons who would be involved in supporting or conducting the

program. These factors will be considered differently by people occupying various positions in the school district--the school board, the school administration, teachers, parents, and community members generally. Each sort of person is likely to have special concerns and interests to be taken into account. For example, a board member or school administrator will be quicker to check the costs involved in implementing a program than will a teacher whose prime concern is apt to be the program's relation to his/her job or personal situation.

In preparing to gather data on costs, implementation requirements, and attitudes, it will be helpful to examine the features of the several alternatives you have identified as they relate to these three factors. Some questions to be answered for each type of factor are suggested below. Obviously, the differences among the programs, rather than their similarities, provide the bases for deciding among them.

Costs. How much will the program materials cost? Will new staff positions need to be budgeted? Will building renovation be required? Can parts of the program that are especially relevant to local needs be purchased separately rather than purchasing the entire program?

Difficulty of implementation. Does the program fit into the existing system without requiring extensive overhauling? Are present staff assignments and qualifications suited to the new program? Will school facilities need to be modified? Will extensive staff training be required?

Attitudes of supporters or participants. Will the program be viewed by community members, parents, or staff members as meeting needs not now being met? Will staff members feel threatened by adopting the new program? Will staff members or others view the program as too radical or too conservative?

Having completed the preliminary activity of considering the alternative resources' features in terms of the three sets of factors, a local constraints/supports analysis should be conducted to help determine which of the several programs should be adopted. The preliminary work provides a clarified picture of each resource's key features and of various people's likely concerns regarding them. The constraints/supports analysis involves consultation with local personnel and community members to obtain their views regarding the alternative resources.

It will be necessary to interview people regarding costs, difficulty of implementation, and attitudes toward the various resources. Before they can respond informatively, they will need to know something about the programs. If time permits, a comparative chart could be drawn up in which each resource is discussed briefly in terms of its salient points. In examining curricula, for example, such areas as the following would be important:

1. Goals and objectives
2. Content and materials -- how they are organized, some unit titles, whether or not tests are provided, types of materials used.
3. Classroom strategy and activities -- pattern of activities, the teacher's role and required preparation, student activities, and how students are tested and evaluated.
4. Implementation requirements -- complete or supplementary curriculum, school organization required, administrator's role, in-service training required, physical facilities needed, program costs.
5. Evaluation -- results of developer's evaluation, of others' evaluation.

Other resources, e.g. organization for instruction, in-service training programs, etc., would require discussion of different points. Sometimes publishers provide printed descriptions or "fact sheets" which could be used for such purposes. Or, a check of the literature might yield descriptive comparisons of some of the programs being considered, such as those produced by the Educational Products Information Exchange.

To illustrate, suppose that a school district is interested in improving its elementary science program because students are not learning enough about science and don't enjoy studying it. The district has isolated two causes for these shortcomings:

1. The curriculum is monolithic and uninteresting; it emphasizes rote learning of facts and concepts and does not encourage consideration of new ideas and modes of thought.

2. Most teachers do not like teaching science, are unknowledgeable in the area, and remain unenthusiastic about it. They use the lecture method and do not plan interesting activities.

The district conducted a resources survey in these two areas. For the first causal area, the following curricula which seemed to deal with these problems and which had these key features were selected for closer study:

Program A	Program B
Reality-enquiry orientation through "science experiences"	Skill-development approach for mastery of basic scientific processes
Can be complete or supplementary; consists of independent units	Complete program with structured sequence based on objectives
Can be used in a variety of classroom conditions	Needs an open classroom with movable furniture and open surfaces
Activity materials found locally	Most activity materials come in a classroom kit organizer

In addition, these two organizational methods were under consideration to deal with the second causal area, the need to provide more teacher competencies in science instruction.

Program X	Program Y
A departmentalized plan in which each teacher is assigned to teach one subject (science, math, etc.) full-time to a succession of classes.	A team-teaching approach providing flexibility in teaching assignments and including arrangements whereby science, for example, would be taught by one or more team members having the greatest interest and competence in the subject.

The next step was to consider these programs in light of district requirements for costs, difficulty of implementation, and attitudes. The cost factor was an important one, and district administrators were consulted regarding the funds available. The newly elected board members were known to be tough on money matters as well. On the basis of this information, it was decided that although Program B consisted of a more defined curriculum that might be easier for teachers to follow and that already included materials needed for the classroom, Program A would be a better choice since it was initially less expensive and also provided the money-saving method of using materials found locally. In addition, Program A would be easier and less expensive to implement because it did not call for a particular type of facility or furniture. In the various staff meetings that were held to discuss the programs, teachers did not strongly favor one program over another since neither required a special science background and each curriculum was complete. Most teachers preferred the idea of Program A's independent units, which offered more flexibility than the structured sequence of Program B.

With regard to the organizational structures, the decision was not so clearcut. School administrators felt that Program X was easier to implement, since it called for simply assigning teachers to departments. They questioned

this practice, however, since some teachers were bound to be assigned to departments that were unsatisfactory to them and this action could cause much dissent and unhappiness. On the other hand, administrators were somewhat hesitant to adopt a team-teaching approach because they feared jealousy among teachers toward the teacher chosen to be team leader. In addition, this method would require considerable planning and re-organization.

Teachers, for the most part, were interested in the team-teaching method because of the flexibility and independent judgment it offered them. They viewed the department specialization plan as too rigid and an exaggeration of the isolation from other adults that they were already feeling since there was no opportunity to work with other teachers and gain their insights and suggestions. They saw the department strategy as having no provision for integrating a student's program or allowing teachers to know their students well. The team-teaching approach, however, offered more flexibility in terms of scheduling various lengths of periods for particular subjects and encouraging teachers to use their planning skills in a cooperative manner for students' benefit. Both programs achieved teacher specialization in their fields, but team teaching offered teachers choices as well.

The question was raised at a PTA meeting by several teachers. Many parents, when they were acquainted with the two approaches, expressed the view that team teaching could provide different teachers for different students; that is for those pupils who either did not like or work well with particular teachers (and vice versa), other student-teacher matches were possible.

Weighting the programs' strengths and weaknesses and people's differing viewpoints regarding the programs is always peculiar to the situation. No guideline for this task can be given other than that of obtaining as much valid information about the programs, local people's opinions, and limitations

(e.g., financial) before making a decision. In the preceding illustration, which programs would you recommend for adoption? Do you agree that Programs A and Y might offer the best solutions?

How alternative resources compare with one another in probable effectiveness and the balance of supports over constraints for each resource being considered are the bases for the final decision. This selection of resources is the subject of the next, and last, objective in the unit.

Objective 8. Select an improvement program, based on alternative resources and local positive and negative factors.

So far in this unit, you have studied how to outline steps in selecting an educational program, identify the area of concern, specify aims, assess shortcomings and their causes, identify alternative resources to remedy the situation, and assess local factors favoring or opposing adoption of the resources. All of this study has had but one purpose -- to facilitate the selection of the improvement program(s) to be introduced.

Objective 8 considers these final topics:

1. Utilizing skills needed in selecting a solution,
2. Clarifying the information obtained that leads toward a solution,
3. Recognizing available options, and
4. Recommending which program(s) to choose.

Let us look at these topics briefly.

1. Utilizing needed skills. There are two types of skills important to the task of helping to select the program(s) for adoption. They are skills in evaluating and integrating the data received from the preceding steps leading up to the selection, and, skills in working with key school and community people in making the actual choice. Situations involving people are never static; often, it is possible to build positive attitudes or to increase support during the planning phase. Modifying negative factors in the local situation can mean the difference between success and failure of a program suitable for adoption.

2. Clarifying the data obtained. By this is meant organizing and expressing the information in a clear, concise way so that it can be read and interpreted quickly. Clear data will provide a strong basis upon which to make the final decision. In the event that more information is needed, this is the

point at which such a determination is made and a plan for obtaining the missing information can be shaped. Good reporting is an aid to building support for a favored program that is meeting resistance.

Presenting key program features in a concise, open-ended manner encourages questions and discussion among board members, school administrators, teachers, or community people, and fosters positive attitudes among participants.

3. Recognizing available options in the selection. There are several actions to be considered in selecting the program(s) to be adopted. The most obvious one, of course, is selecting a program for system-wide adoption. Such a course usually indicates that a school district has sufficient funds and personnel to mount the program and also has complete confidence in the program to meet the needs of its students. A second possibility would be to pilot test the program in one school in order to keep costs down and to view results of the program before diffusing it throughout the system. This approach is a more common one since it is often difficult to relate a program's values to the local district needs without having firsthand evidence on its strengths and weaknesses.

A variation of this approach is to pilot test more than one program and compare the results. A school district might opt to take this course when two programs are viewed as equal in terms of their potential for remedying causes of the shortcomings. Two or more schools might be chosen as pilot test sites for the programs being considered; the basis of choice should be the schools' ability to provide a setting and target audience that are generalizable to other schools in the district and in their staff and community's favorable attitudes toward trying the program.

Another option that a school district could elect to do is to adapt features from two or more programs to the local situation -- a "mix and match"

approach to try to achieve a tailor-made solution to the problem. Naturally, it is important to introduce program components in all areas needing improvement; otherwise, it would be difficult to assess the results when only part of the problem had been addressed.

4. Recommending which program(s) to implement. This final task occurs when all of the information is collected and when it has been decided how best to introduce the program(s) whether in terms of system-wide adoption, pilot testing, or adoption of features from different programs. The recommendation should be accompanied by the supportive data that led to the decision so that the person who reviews the recommendation has the benefit of information used in reaching the decision.

Now read the prelude to Exercise 8 which is the last one in the unit. It will help you to organize and present information for use in selecting a program.

Exercise 8

First, review the description of the elementary science program presented in Objective 7. This illustration will serve as background material for you to complete this exercise.

Assume that you are the Director of Elementary School Programs in the district and that you must recommend to the Superintendent which program(s) should be selected and how it should be implemented in the district. Suppose that you have spent time in gathering information about the programs and viewpoints of district personnel and community members and that you find a situation where the answers are not so clearcut. Although the cost restrictions still are present, people seem to be divided on the issue of which program(s) will be most suitable to the needs of elementary schools in the district. Strong cases have been presented that favor each of the four alternative

programs being considered (two science curricula and two organizational approaches). You have a time constraint (it is April) and there is not enough time to acquire more information or to locate more alternative resources for examination. A decision must be made quickly so that program materials can be ordered and plans developed and put into action for September implementation.

Which programs would you recommend to the Superintendent? Would you suggest system-wide adoption of them? Write your recommendations in the space provided and then, by selecting information from the illustration, indicate which data led you to your conclusions.

Upon completion of the exercise, check your work with the Answer Key.

EXERCISE 8 - WORKSHEET

Recommending an Improvement Program for Adoption

Directions: Remember that there are two types of programs being considered: Curricula (Programs A and B) and Organization for Instruction (Programs X and Y). Indicate which of them you would recommend for adoption and how you would put them into operation in the school district. Then list the information gathered from the illustration that led you to your decision.

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1. Program(s) recommended for adoption (circle choice(s) below):

   Curricula -- A B Organization for Instruction -- X Y

2. Would you recommend system-wide adoption? If not, what would you recommend? Why?

3. What information in the illustration led you to your conclusions?

EXERCISE 8 - ANSWER KEY

Recommending an Improvement Program for Adoption

There are, of course, several courses of action that might be recommended. There is one obvious fact: Two causes for shortcomings exist (uninteresting curriculum and lack of teacher competencies in elementary science instruction); and if the science program is to be improved significantly, both of these causes must be remedied.

1. Program(s) recommended for adoption:

   Curricula -- A and B Organization for Instruction -- Y only

2. System-wide adoption is not recommended. Pilot testing should be carried out by combining Curricula A with Organization Y in one or more schools and Curricula B with Organization Y at other sites. The reason for trying both curricula is based on the split between local personnel favoring one or the other. Organization Y is more clearly the better choice. Pilot testing permits a tryout of the more expensive Curriculum B in a small setting so that commitment of funds is not great. The results of the pilot testing will form the basis for the district's decision on which program to implement on a system-wide level.

3. Information leading to these conclusions includes the following:

   Both curricula had strong proponents in the district.

   Although Curriculum B was costlier in terms of initial expense and implementation difficulties, it could prove to be superior to A in pilot testing; in this case, the district might choose it for system-wide adoption if these factors became less important with the passage of time. Pilot testing provided a small, inexpensive method of trying it.

   Since both curricula were favored, it would be unfair to impose one of them on all students and teachers.

   Because Organization Y offered flexibility and opportunity for teacher judgments, it was felt to be the better of the two programs.

   Local personnel would have a choice of programs and this fact would enhance possibilities of successful implementation since enthusiasm would be a strong factor in getting them off the ground.

   If none of the choices proved to be suited to the district at the pilot stage, little in the way of funds, time, and energy would have been lost.

SUMMARY

The importance of Exercise 8 was to emphasize that both causes had to be addressed and that pilot testing is representative of the phase-in reality sought by many school districts.

With the completion of Exercise 8, Unit 8 draws to a close except for the Post-Assessment which follows. It is hoped that the order and logic of the steps presented and discussed in this unit have provided you with occasion to consider the need for a careful, well-planned approach to selecting improvement programs for implementation and that you will utilize what you have learned here in your future educational improvement tasks. Successful change requires a deliberate, rational, problem-solving approach if the true causes of shortcomings are to be overcome and the best possible solution is to be selected.

Turn now to the Post-Assessment Exercise. When you have completed it and checked your responses with the Answer Key, you will have a sense of how well you have mastered the objectives in this unit.

POST-ASSESSMENT EXERCISE - UNIT 8

Directions: This exercise is the same as the Pre-Assessment Exercise which you completed at the beginning of your study of this unit. Review your estimates of mastery of the items on the Pre-Assessment Exercise (page 7); you need do only those items which you judged to be less than on target. Check your answers with the Pre- and Post-Assessment Exercise Answer Key.

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1. Suppose that you are the curriculum coordinator of secondary programs in a school district. Through complaints of school personnel and some parents, you are made aware of problems with the social studies program at the two high schools. You know that some funds are available that could be used for improvement in this area. What procedure would you choose to follow from the point of receiving the various complaints through finally to recommending an improvement program to the Superintendent for installation the next year? (Objective 1).

2. Assume that your assignment is to help a school district in identifying those areas most needing improvement. What general plan of action would need to be followed? (Objective 2).

POST-ASSESSMENT EXERCISE (Cont'd.)

3. Suppose it is decided that a particular curriculum area (say, mathematics) need improvement. What would need to be done to determine shortcomings of instruction in the area? (Objectives 3 and 4).

4. Average reading scores at the Watson Elementary School are from one to two years below grade level. What are some likely causes for this shortcoming? (Objective 5).

POST-ASSESSMENT EXERCISE (Cont'd.)

5. If you had determined that social studies materials were inadequate and teachers lacked sufficient preparation for teaching social studies in a creative, stimulating fashion, what kinds of resources would you seek and where would you look? (Objective 6).

6. Assume that, as principal of an elementary school, you have investigated the area of reading and have uncovered three potentially good programs that address themselves to the particular reading problems being experienced in your school. What kinds of information about local factors would be needed in order to arrive finally at a recommendation of one of the three programs to the Superintendent? (Objective 7).

PRE- AND POST-ASSESSMENT EXERCISE - ANSWER KEY

1. What procedure would you follow from receiving complaints to recommending an improvement program to the Superintendent for installation?

   Step 1: Identify the area of concern. This step was done for you; the area needing improvement was identified as the social studies program.

   Step 2: Specify aims in the area of concern. It is necessary to know what the desired objectives are before it can be decided that corrective action is needed.

   Step 3: Assess shortcomings in accomplishing these aims. Analyze the shortcomings in relation to the desired aims for an accurate picture of what is lacking.

   Step 4: Analyze likely causes for these shortcomings. Knowing the causes of shortcomings allows one to plan corrective action aimed at remedying the causes and therefore eliminating the shortcomings.

   Step 5: Identify alternative resources for remedying the shortcomings. A survey of programs aimed at the type of shortcomings being experienced at the local level provides options from which to choose.

   Step 6: Assess local factors favoring or opposing adoption of each resource. Often, local factors prove to be strong stimulants or inhibitors of the adoption of a program and thus need to be taken into account when selecting a program.

   Step 7: Select an educational improvement program based on alternative resources and local positive and negative factors. This final choice becomes possible after gathering the needed information in the preceding steps.

2. What plan of action would you follow in helping the district to identify areas most needing improvement?

   List components of school system where needs for improvement might be found.

   Identify best sources of information for each item on the list.

   Obtain needed information and make an initial list of areas needing improvement.

   Check and revise the initial list by discussing it with key informants.

   Make a priority listing of areas needing improvement.

PRE- AND POST-ASSESSMENT - ANSWER KEY (Cont'd.)

3. What needs to be done to determine shortcomings of instruction in a curriculum area?

   List instructional aims for the area.

   Decide what data are needed to assess the degree of attainment of each aim in the area.

   Determine which data are available already (test scores, records, reports) and how to get needed information (interviewing, observation, questionnaires).

   Collect the data that still are needed.

   Analyze the data to identify shortcomings in achieving the desired aims.

4. What are some likely causes for the shortcoming in reading at Watson Elementary School?

   Causes may lie in one or more of the following areas of a reading program:

   Learning materials -- badly sequenced, not representing a broad enough ability range, irrelevant to students' backgrounds or concerns.

   Teaching methods -- improper attention given to basic reading skills, students don't have the opportunity to learn words that are meaningful and important to them, teacher is ineffective because time is spread over several groups and many students are left to struggle alone with their reading problems.

   Student grouping -- ability grouping inhibits individual students' potential, tendency may be to keep students in same group level year after year, minority children may be grouped into lowest ability group.

5. For the social studies area, what types of resources would you seek and where would you look?

   Materials and products in social studies; in-service training programs for teachers.

   Consult with people at state education department universities, national clearinghouses, other school districts for ideas and leads.

   Educational Resources Information Center (ERIC) files.

PRE- AND POST-ASSESSMENT - ANSWER KEY (Cont'd.)

Read product guides offering comparative descriptions of curricula, materials, training programs, etc.

Conduct a library search via Education Index and other available indexes, reference books, etc.

6. What kinds of information about local factors would be needed to arrive at a decision regarding an elementary reading program?

Costs, difficulty of implementation, attitudes of persons who would be involved in supporting or conducting the program. Such information would be obtained mostly by interviewing local personnel.

Training for Leadership in Local Educational Improvement Programs

UNIT EVALUATION FORM

Unit 8. Selecting an Educational Improvement Program

Evaluation by_____ Date_____

Position_____ Organization_____

Please give your reactions to this unit by checking and writing in your opinions and recommendations. Returning this form to Research for Better Schools, 1700 Market St., Philadelphia, Pa. 19103 (Attention: Glen Heathers) will help us judge the value of the unit as well as aiding in its revision.

A. Your judgment on the importance of a unit on this topic as training for leadership in local educational improvement programs.

Check: Very High____ High____ Moderate____ Low____ Very Low____

Your comments:

B. Your judgment of the quality of the introductory section of the unit.

Check: Very High____ High____ Moderate____ Low____ Very Low____

Your comments:

C. Your judgment of the adequacy of the set of unit objectives.

Check: Very High____ High____ Moderate____ Low____ Very Low____

What objectives do you recommend omitting? Why?

What objectives do you recommend adding? Why?

Unit Evaluation Form - Con't.

D. Your judgment on the quality of the unit contents.

Check: Very High___ High___ Moderate___ Low___ Very Low___

Your comments:

E. Your judgment on the quality of the unit exercises.

Check: Very High___ High___ Moderate___ Low___ Very Low___

Your comments:

F. Your judgment on the quality of the unit pre- and post-assessments.

Check: Very High___ High___ Moderate___ Low___ Very Low___

Your comments:

G. About how many hours did you take to complete this unit?_____

H. How valuable do you judge this unit to be for training each of the following categories of educational leaders? Please enter the appropriate symbol.
H - Highly valuable. M - Moderately valuable. L - Low value

___ School system central administrators

___ Building principals

___ Curriculum coordinators

___ Field consultants of state education departments

___ Graduate students in administration or supervision

___ Other: